



FRIDAY, NOVEMBER 14, 1879.

The Wearing Qualities of American Steel Rails.

The following, which is a portion of a pamphlet published by the American Iron and Steel Association, contains some interesting and valuable information concerning the life of steel rails, as well as evidence of the excellent results obtained from those of American manufacture:

In the London Standard for Sept. 27, 1879, there appeared the following false and slanderous reference to the quality of American steel rails:

"Happily the Bessemer rails of England are making their way into the American market, despite the obstacle presented by the high protective duty. An order for 10,000 tons of English steel rails for the New York Central Railroad was given a short time back by Mr. Vanderbilt for the reason that, although the English rails cost 25 per cent. more than the American rails, they were cheaper in the end owing to their greater durability. No American manufacturer would guarantee his rails to last longer than five years, subject to the heavy strain of the New York Central line. But the English manufacturer offered a guarantee of twelve years' wear, all rails not coming up to the standard to be replaced free of cost. That this was no fallacious undertaking was proved by the fact that there were English rails on the American line which had been in constant use for many years without showing the least signs of wear, while American steel laid at the same time was worn out and required to be replaced. So shrewdly did the railway authorities recognize their position that they resolved to use American rails where the traffic was light—perhaps to propitiate their countrymen—and English rails where the traffic was heavy. Thus it was officially announced: 'A road with the enormous traffic of the New York Central cannot afford to be deprived of its tracks every few years for the laying of new rails, and where the heaviest wear is we shall lay the English steel.'"

As this paragraph has been reproduced in this country in the columns of journals unfriendly to American industrial interests, and as other statements embodying substantially the same false allegations have from time to time during the present year appeared in the same journals, the American Iron and Steel Association deems it proper to submit to the public, in defense of American manufacturing integrity and skill, such testimonials to the wearing qualities of both English and American steel rails as it has been able to procure in the brief space of time during which the subject has been under consideration. If objection be made that these testimonials are not of sufficient scope nor comprehensive of sufficient time to justify any general conclusions concerning the comparative merits of English and American steel rails, the answer is that few railroad companies in this country have preserved a record of the life of rails laid down in their tracks, whether of iron or steel, and that such records as have been preserved by leading companies, and are here-with submitted, are not partial in their character, but impartially embody the results obtained in the use of both English and American steel rails by these companies.

There is, however, one phase of the inquiry about to be made which places American steel rails at a disadvantage, and, without claiming any odds for these rails on this account, it is but just that it be stated. A reference to the history of the Bessemer process for manufacturing steel will show that it was perfected in England in 1857, in which year a rail produced by it was laid down in the Midland Railroad, where it remained for sixteen years, all the while being subjected to hard service. From 1857 steel rails were regularly manufactured in England, the experimental stage of the Bessemer process having ended in that country in that year. The depressing effect upon all our industries which was produced by the tariff of 1857 and the occurrence of our civil war in 1861 combined with the promise of ultimate satisfactory results from the experiments of Mr. Kelly, of Kentucky, who had anticipated Mr. Bessemer in the discovery of the pneumatic principle, to prevent the prompt introduction of the Bessemer process into this country, and it was not, therefore, until 1864 that arrangements were made to introduce it, and not until 1867 that the conflicting claims of the holders of the Bessemer and Kelly patents were so far harmonized as to admit of the manufacture of Bessemer steel in this country as a commercial product. It will be seen that ten years elapsed after the perfection of the Bessemer process in England before it was fully naturalized upon American soil, and that England had, therefore, these ten years the start of the United States in experience in its workings. To-day the claim is not recklessly made that American practice and American appliances in the manufacture of Bessemer steel are superior to those of England, but when this industry was ten years old in England, and in its toothless infancy in this country the situation was exactly reversed. England had experience, accumulated skill, and perfected machinery in the manufacture of the new product; we lacked all these, and we particularly lacked a knowledge of the value of our own natural resources for the manufacture of this product. Hence, it may fairly be claimed that, in the comparisons we are about to submit, and which go back to the first year in which steel rails as a commercial product were made in the United States, the steel rail manufacturers of this country are placed at a disadvantage.

PENNSYLVANIA RAILROAD.

In Tables 1 and 2, which will be found herewith, the experience of the Pennsylvania Railroad Company in the use of American steel rails on its main line and branches west of Philadelphia is given; in Table 3 the experience of the same company in the use of American steel rails on the division embracing the United Railroads of New Jersey is given; and in Table 4 the experience of the same company in the use of steel rails of foreign manufacture on its main line is given. The experience of other railroad companies is presented in subsequent statements. We will first analyze the figures of the four tables relating to the Pennsylvania Railroad, premising the analysis with the remark that the strain to which rails on this road have been subjected has been as severe as that upon rails on any other road in the country. Its traffic has been as heavy as that of any other road, its grades are as steep as those of any other road, and both freight and passengers are moved as rapidly over its tracks as over the tracks of any other road. These statements are made not to praise the Pennsylvania Railroad, but to emphasize the fact that it is in all respects a representative American road, and the further fact that the steel rails which have been laid in its tracks have been subjected to as hard usage as steel rails laid in any other tracks of American railroads.

It may here very properly be remarked that the steel rails made by the Pennsylvania Steel Company have been taken for comparison with foreign rails, because this company was the first to engage actively in the manufacture of steel rails

TABLE 1.—STATEMENT OF AMERICAN STEEL RAILS—WORKS NOT GIVEN, (IN PENNSYLVANIA), Laid on the Pennsylvania Railroad, west of Philadelphia.

When laid.....	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Total.
No. of tons.....	1378.00	5275.00	7671.00	10319.00	18012.00	19195.00	11058.00	6001.00	5481.00	4008.00	2823.00	92671.00
Removed in 1871.....		31.62		6.12								37.74
" " 1872.....		30.79	15.95		3.52							50.26
" " 1873.....		0.50	9.07	4.59	17.07	8.20	3.55					42.98
" " 1874.....			29.79	19.19	41.89	119.37	1.07					211.31
" " 1875.....		44.00	284.15	151.31	463.90	19.73	0.25	5.25	0.80			969.48
" " 1876.....			26.62	274.15	715.06	327.34	7.03		1.25	0.30		1371.75
" " 1877.....			3.76	207.53	941.86	667.10	325.71	135.52	38.43	30.00		2360.60
" " 1878.....		10.90	20.47	8.34	243.75	283.46	210.72	2.01	1.95			781.60
Total removed.....		86.28	421.43	665.11	2429.65	1438.72	518.33	142.78	42.43	30.30		5805.12
Per cent. removed.....		6.40	7.99	8.67	23.54	7.61	2.85	1.29	0.65	0.50		6.26

Average life of worn-out rails, 5.07 years.

TABLE 2.—STATEMENT OF PENNSYLVANIA STEEL COMPANY'S RAILS, Laid on the Pennsylvania Railroad.—Philadelphia to Pittsburgh and Branches.

When laid.....	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Total.
No. of tons.....	1272.00	4023.00	6949.00	7406.00	7207.00	9257.00	4465.00	2901.10	2028.50	290.40	1709.00	47208.00
Removed in 1871.....		17.17										17.17
" " 1872.....		30.79		3.25	14.47							58.51
" " 1873.....			27.22	10.29	30.35	105.38						173.24
" " 1874.....			35.63	265.02	138.84	25.67	12.10		5.25			482.51
" " 1875.....			26.40	268.32	208.23	26.55	7.03					596.53
" " 1876.....				207.30	521.30	123.06	166.55					1017.21
" " 1877.....												258.16
" " 1878.....		10.90	2.67	8.34	187.47	44.81	13.00					258.16
Total tons removed.....		77.32	338.48	636.34	978.49	311.00	189.13	5.25				2536.91
Per cent. removed.....		6.08	8.41	9.16	13.21	4.33	2.04	0.12				5.38

Average life of worn-out rails, 5.51 years.

TABLE 3.—STATEMENT OF PENNSYLVANIA STEEL COMPANY'S RAILS, Laid on the United Railroads of New Jersey Division.

When laid.....	1873.	1874.	1875.	1876.	1877.	1878.	Total.
Tons laid.....	2013.75	2756.10	4342.00	3808.75	1105.90	2011.15	16037.65
Removed in 1873.....	1.20						1.20
" " 1874.....	6.55	2.90					9.45
" " 1875.....	3.65	3.60					7.25
" " 1876.....	1.25	0.57	2.40				4.22
" " 1877.....	2.80	1.45	2.85	0.30	0.25		7.65
" " 1878.....	0.30	0.34	0.57				1.21
Total tons removed.....	16.05	8.86	5.82	0.30	0.25		31.28
Per cent. removed.....	.00797	.00321	.00134	.00008	.00023		.00195

Average life of worn-out rails, 1.64 years.

TABLE 4.—STATEMENT OF FOREIGN STEEL RAILS, Laid on the Pennsylvania Railroad, west of Philadelphia.

When laid.....	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	Total.
No. of tons.....	157.00	375.00	1579.00	4058.00	2945.00	1802.00	1008.00	2658.00	14582.00
Removed in 1871.....			0.67	4.76	1.17	6.87	1.25		14.52
" " 1872.....				14.59	4.15	21.63			40.37
" " 1873.....				3.50	18.27	10.45	5.91	1.70	40.14
" " 1874.....					62.28	6.67			68.95
" " 1875.....				152.88	489.40	44.73	65.76		752.93
" " 1876.....				23.65	14.92	567.01	49.08	28.00	682.66
" " 1877.....				7.44	525.04	17.76	115.54	0.55	666.33
" " 1878.....				0.30	23.80	40.62	3.32	4.68	106.81
Total tons removed.....			0.67	176.09	630.31	670.83	661.01	200.32	2372.71
Per cent. removed.....			0.18	11.15	15.53	22.77	36.67	19.87	16.27

Average life of worn-out rails, 7.77 years.

in the United States, and therefore its statistics afford the nearest parallel with the statistics of English steel rails. It must not be inferred that the Pennsylvania Steel Company's steel rails are the only good American rails, as the general standard of quality is uniform at all American works.

(Table 1.) Of 92,671 tons of American rails laid from 1868 to 1878 only 5,805.12 tons, or 6.26 per cent., were removed. This is a good record for eleven years, but it would have been very much better if the exceptionally bad character of the rails made in 1871 had not rendered necessary the removal of so many of them. It might be urged, in justification of this exceptional experience, that the companies which manufactured the rails laid down in that year had not then so fully mastered the whole art and mystery of the Bessemer process that further experiments which might be disastrous would be impossible; but we prefer to tell the exact truth, which is that the rails laid down in 1871 were largely manufactured from pig iron of inferior quality, the scarcity of all kinds of pig iron in that year and the urgent needs of the railroads combining to prevent a careful selection of pig iron for the Bessemer works of the country; and, further, that unsatisfactory soft steel rails were made in that year as a consequence of the adoption by the Pennsylvania Railroad Company of the drop test. But for these unfortunate circumstances the percentage of removals from 1868 to 1878 would have been much less than it was. Even with a percentage of 6.26 removals in these eleven years, the average life of the rails removed was 5.07 years.

(Table 2.) In this table, extending over the same period of years, from 1868 to 1878, the quality of the rails manufactured by only one company (the Pennsylvania Steel Company) is involved. The result is even more satisfactory than that presented in the first table. Of a total of 47,208 tons of rails laid in these years, only 2,536.91 tons, or 5.38 per cent., were taken up, and of 6,629 tons laid down from 1875 to 1878 not one rail was removed. The average life of the rails removed from 1868 to 1878 was 5.51 years. The Pennsylvania Steel Company shared in the unfortunate experience of 1871, or the aggregate and percentage of removals would have been much less than the table records, and the average life of the rails removed would have been much longer.

(Table 3.) This table also concerns the quality of the Pennsylvania Steel Company's rails, but only on the New Jersey Division of the Pennsylvania Railroad Company's line. The period embraced is from 1873 to 1878. The total quantity of rails laid was 16,037.65 tons, and of these only 31.28 tons were removed, or less than one-fifth of one per cent. The average life of the rails that were removed was 1.64 years. The exceedingly small quantity of rails removed during the whole period defies all criticism.

(Table 4.) This table refers to the experience of the Pennsylvania Railroad Company in the use of foreign steel rails, mostly, if not wholly, of English manufacture. These rails were laid down from 1864 to 1871, in which latter year all further purchases of foreign steel rails by this company practically ceased. The total quantity laid down in the eight years named was 14,582 tons, and of these 2,372.71 tons, or 16.27 per cent., were removed from 1871 to 1878. The average life of the rails removed was 7.77 years.

An examination of all the tables will show that the foreign steel rails which were first laid down have worn better than those which were last laid down, and that the quality of American rails has steadily improved from year to year.

A comparison of the results established by the tables relating to the Pennsylvania Railroad shows that the average life of the foreign rails removed from the track was greater than the average life of the American rails removed, the ratio being about seven years to five years. Evidently a smaller percentage of defective or imperfect foreign rails was laid down than of defective or imperfect American rails. Only rails of this character could have been removed, for a large majority of all the rails laid down, both of foreign and domestic make, still remained in the track at the close of 1878; these rails may be assumed to have been mechanically perfect. It is practically impossible to manufacture large quantities of steel rails, or, indeed, of any other metallurgical product, in unvarying perfection, and defective steel rails are sometimes made by all makers, foreign and domestic. Viewed from a standpoint friendly to American rails, it may be said that the longer life of the foreign rails removed from the track of the Pennsylvania Railroad may be accounted for by frankly admitting that all of the foreign rails laid down were subjected before shipment, for commercial reasons, to a more rigid inspection than American rails, and, therefore, that fewer imperfect rails of foreign make than of domestic make were laid down. Or, the variation of seven to five, favorable to foreign rails, may be accounted for by citing the longer experience, as already explained, of foreign manufacturers, especially in the selection of raw materials, enabling them to make fewer defective rails. But a reason for this variation that, in an apologetic sense, is still more favorable to the American makers, has already been mentioned. The tables we have given show that by far the greatest percentage of removals of American rails was of the make of 1871. This was the year of the iron famine, during which all kinds of pig-iron were scarce in this country, and the demand for both pig-iron and rails being in excess of the supply, as was lately the case, inferior pig-iron was necessarily used in American Bessemer converters. It was the year, too, of the delusive drop test.

But the phase of the steel-rail question which has just been

considered is one of slight importance when compared with another which we shall now present. The life of the rails removed from the track of the Pennsylvania Railroad has been shown; what of the wearing qualities of the rails which have not been removed? Our tables show that only a small percentage of all the steel rails laid in the track of the Pennsylvania Railroad and its branches, whether of foreign or domestic make, was removed down to the close of 1878, and that, of the rails which were removed, the largest percentage was of foreign rails. The percentage of removals of American rails is largest in Table 1, embracing the eleven years from 1868 to 1878: it was 6.26 per cent. The percentage of removals of foreign rails from 1864 to 1878, fifteen years, was 16.27 per cent. These percentages when analyzed are favorable to the wearing qualities of American as compared with foreign steel rails in the ratio of 17.5 to 9.2, or almost two to one. They indicate as plainly as figures can indicate anything that the American rails which have been laid in the track of the Pennsylvania Railroad are wearing almost twice as well as the foreign rails laid in the same track, notwithstanding the longer experience of the foreign makers; notwithstanding their more rigid system of inspection; and notwithstanding the difficulty of procuring good Bessemer pig-iron in this country in 1871.

If groups of three or four years be taken for comparison, instead of the whole periods during which American and foreign steel rails have respectively been in use on the Pennsylvania Railroad, it will be found that the results are equally favorable to American rails. In the three years 1868-69-70 there were laid 14,274 tons of American rails, of which 1,172.82 tons have since been removed, or 8.21 per cent. In the same years there were laid 5,755 tons of foreign rails, of which 1,532.16 tons have since been removed, or 26.62 per cent. In the four years 1868-69-70-71 there were laid 24,593 tons of American rails, of which 3,602.47 tons have since been removed, or 14.64 per cent. In the same years there were laid 8,413 tons of foreign rails, of which 1,565.64 tons have since been removed, or 18.61 per cent.

It is found, therefore, that the true test of the wearing qualities of domestic and foreign steel rails is in the percentage of removals and not in the life of the rails removed; in the number of the rails which are still in service rather than in the behavior of those which have been withdrawn from service.

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.

On the Philadelphia, Wilmington & Baltimore Railroad 17,245.83 gross tons of steel rails have been laid from 1864 to 1878, both years inclusive. Of these rails 7,334.66 tons were made by the best foreign makers, but mainly by John Brown & Co., being the best quality of rails made by that famous firm. The remaining 9,911.17 tons were all made by the Pennsylvania Steel Company, except 178.46 tons made by the Cambria Iron Company. The following table shows the number of gross tons of steel rails of foreign or domestic manufacture laid on this railroad each year, from 1864 to 1878:

Years.	Foreign.	Years.	American.
1864.....	25.22	1864.....	
1865.....	223.25	1865.....	
1866.....	377.09	1866.....	
1867.....	810.25	1867.....	
1868.....	504.08	1868.....	
1869.....	578.40	1869.....	614.16
1870.....	1,221.02	1870.....	178.53
1871.....	2,030.80	1871.....	2,061.57
1872.....	908.48	1872.....	90.86
1873.....	526.47	1873.....	512.98
1874.....		1874.....	1,889.44
1875.....		1875.....	2,336.74
1876.....		1876.....	1,650.15
1877.....		1877.....	84.60
1878.....		1878.....	492.14
Total.....	7,334.66	Total.....	9,911.17

The most remarkable fact to be stated in connection with these steel rails is that not one rail has yet absolutely worn out. Fifteen rails have failed at the end, so that they had to be cut, but they were relaid in the track elsewhere. Of these fifteen rails four were of foreign make and eleven of American make. As all these rails are still in the track of the Philadelphia, Wilmington & Baltimore Railroad, the American steel rails have worn fully as well as those foreign rails which were laid at the same time. Some of the American rails have been in use for ten years, others for nine years, others for eight years, others for seven years, etc., and all may be relied upon for still further service.

BALTIMORE & OHIO RAILROAD.

Mr. W. N. Bolling, Chief Engineer of the Baltimore & Ohio Railroad, makes the following statement, under date of June 28, 1879, concerning the use of foreign and American steel rails in the tracks of that road:

The Pennsylvania Steel Company, Feb. 3, 1876, contracted to deliver in June, 1876, to the Baltimore & Ohio Railroad Company 1,000 tons of rolled Bessemer steel rails of the best quality and make, from bloomed or hammered ingots, and 72 lbs. to the yard. The rails were warranted to be equal under similar service to any 1,000-ton lot of steel rails furnished to the Baltimore & Ohio Railroad Company by Sir John Brown. The 1,000 tons were delivered in May, June, and July, 1876, in 3,125 bars, and were distributed as follows: West of Ohio River, 96 bars; Washington Branch, 718 bars; main stem, east of Cumberland, 2,341 bars. Reports of all rails removed from the track have been kept since December, 1876. The rail reports, however, have returned no Pennsylvania Steel Company's rails removed from the track for any cause. These rails have been in service only three years, and are of a heavy section—72 lbs.

The Sir John Brown and early English steel rails are of a low light section—60 and 64 lbs. The failure of these rails is usually by breaking at the joint, and not from wear. The true service comparison of rails is by the annual percentage of failures and the tonnage. We have Sir John Brown's rails that have been in the track over 14 years and are doing service to-day. The first 1,000-ton lot was laid in 1869. It would be difficult to ascertain how many rails of a particular 1,000-ton lot laid in 1869 are now in the track, and what the removals have been for each year since 1869. No English rails of 72 lbs. were laid prior to June, 1874. The best English steel rails were delivered prior to 1874, and for comparison a 1,000-ton lot prior to 1874 should be taken. The rails of 1869 have shown ten years' service. The tonnage prior to 1876 was heavier than since 1876.

The conclusions are that the years of service of the Pennsylvania Steel Company's rails are insufficient to compare them with the English rails of 1869; that the best Sir John Brown's steel rails will give a service of more than sixteen years on this road; and that the Pennsylvania Steel Company's rails have an unobjectionable record for the three years of service.

Mr. G. R. Blanchard's Testimony before the New York Investigating Committee.

(Continued from page 592.)

Mr. Shipman, the counsel of the Erie road, asked Mr. Blanchard to give the facts in relation to the origin and present status of the fast freight lines, saying that he did this because there was a floating opinion that these lines were parasites of the railroad companies.

ORIGIN OF FREIGHT LINES.

The Chairman said that there was no such opinion on the part of the Committee.

Mr. Blanchard said that when the trunk lines were first completed to their western termini, the roads beyond being independent of them, each railroad billed the freight only to the end of its own road, and then took receipts for it from the road to which it was consigned, and at the point of transfer the freight was usually transferred from the first road's cars to the second's, and tallied. Or, when, in exceptional instances, bills of lading were given through, they were accompanied by limitations as to liability which compelled the owner of the freight, if any loss occurred, to find the line on which the loss occurred, and seek his remedy from it. To avoid these detentions and other disadvantages fast freight lines were established, the first being "Cassell's Dispatch," working over the New York Central, which was afterward merged into the Merchant's Dispatch, which is largely owned by the American Express Company. The second was the Great Western Dispatch, working over the Erie, which began operations Feb. 1, 1857. In January, 1864, the (Star) Union Line was started on the Pennsylvania, and in September, 1868, the National Line, over the same road. In 1871 the Baltimore & Ohio, after a study of the above lines by the witness, then its General Freight Agent, started the Globe Line and the Commercial Line.

There were different kinds of contracts between these freight lines and the railroad companies. In the early days, and especially on the Erie, the freight lines paid the railroad so much a car, and got what they could for freight. He had found such contracts on the Ohio & Mississippi with the Great Western Dispatch. This form of contract was often very profitable to the freight line but bad for the railroad. Another form provided that the freight line should receive a certain percentage of the earnings from the freight carried in its cars. When he came upon the Erie he found such a contract with the "Erie & Pennsylvania Dispatch," but with a provision that the railroad company might abrogate it by notice before May 1, 1875. This notice was given and the line merged with the Great Western Dispatch. Before that there was a peculiar contract with the Great Western Dispatch. It had a nominal capital of \$3,000,000, of which the Erie had \$900,000 and the United States Express Company \$600,000, and the rest was held by the other railroads over which the line worked, this capital being represented by cars contributed by these several stockholders. The percentages of earnings, which witness believed to be 15 per cent. on first and second class and 5 per cent. on fourth-class freight, were to be paid to the Manager of the freight line; and out of this first the expenses of the line were paid and then dividends to the stockholders. He objected to this contract that it gave the United States Express Company one-fifth of the earnings of the freight line, though it did no transportation for it, as the railroads in the line did. It was finally agreed that its cars should be sold as far as possible, and its interest in the line decreased with the cars it had in it. Of the 600 cars which it had originally, 480 have been sold. With this exception the Great Western Dispatch is now run on the cooperative plan. In this connection Mr. Blanchard submitted the following extract from a letter from himself, the General Superintendent and the Auditor of the Erie, which was used in a recent litigation:

"The next charge relates to the Erie & North Shore and Great Western Dispatch Companies' freight lines.

"The Erie Railway, with 37 of its connections, are the sole parties to the contracts for their formation, operations, receipts, expenses and results; they are both governed by boards of managers or directors, consisting of one officer from, and designated by, each railway in interest; all their officers, employees and agents are engaged at fixed salaries, and there are not and cannot be any private interests, gains or emoluments whatever, in their operations or results, and they are not companies; they are merely the designations or trade-marks of certain routes for marking and the quicker dispatch of goods, as freight trains are designated by numbers or passenger trains by letters; all the railways parties thereto act cooperatively under the two said contracts, and each and all share any and all profits, gains, rates, drawbacks, concessions, advantages or disadvantages whatever, in their business, and pay their total expenses in the proportions of their several earnings in said lines, which are ascertained and stated monthly at a meeting of the railway freight officers of the companies in interest, by whom their forms, systems, vouchers and account are fixed and regulated upon personal examinations; all railway officers interested and present at the monthly meeting sign a joint certificate of audit, upon which the ex-

penses are refunded each month to keep full their capital or managing funds, which are contributed entirely by and belong only to the railways in interest; their managers and agents have no power whatever to make or change rates, agree to drawbacks, collect or refund moneys, or do anything but solicit traffic at rates fixed solely by the railway companies, or take such other action as the railways authorize. We make these explicit statements, and attach a copy of the North Shore contract in appendix, to disprove effectually false, ignorant and malicious statements of this character, scope, and operation, which have been persistently repeated. This railway formerly had fast freight lines covering private interests, the last of which was entirely eliminated by your order (President Jewett's) May 1, 1875."

Mr. Blanchard submitted a statement of the monthly audit of the Erie & North Shore Dispatch for last August, as follows:

The percentages of the through freight and of the earnings from through freight over the Erie done in May last by each freight line and aside from any freight line were as follows:

	Tons.	Per cent.	Revenue.	Per cent.
Erie & North Shore Line.....	33.42		27.47	
Erie & Milwaukee Line.....	1.02		1.71	
Great Eastern Line.....	0.11		.10	
South Shore Line & Great Western Dispatch (Buffalo).....	12.49		8.13	
Great Western Dispatch and Erie & Pacific Dispatch (Salamanca).....	27.91		34.44	
Wabash & Erie Line.....	.32		.68	
Other through freight not via fast freight lines.....	24.13		29.47	
	100.00		100.00	

This included shipments via the lakes. When navigation is closed a larger proportion of the whole goes by the freight lines.

Witness believed that freight lines have been an absolute necessity in the past conditions of through freight business; but as perfection and extension of the pooling system would enable the railroads to modify the practice, though it will always be desirable to have line cars limited to certain routes of transportation, and agencies authorized to give through bills of lading and the joint responsibility of the roads over which the shipment passes.

As it exists the system was adopted to meet the demands of shippers.

In answer to Mr. Sterne, Mr. Blanchard said that the overcharges on the Erie & North Shore account above were properly rebates, and all on account of east-bound freight; overcharges were sometimes questioned; the contract with the freight line requires that the charges shall always be as high as by other routes; if one company thought they were not so high, it might refuse to pay until it was satisfied.

Mr. Blanchard was examined at some length as to whether a clearing-house system like that of England would not supply the place of fast-freight lines, but thought there would be no particular advantage in such a system, though he favored concentrating the control of traffic as was done through Mr. Fink's office. He found private stockholders in the Erie & Pacific Dispatch when he came to the Erie. They were not officers of the company.

Here Mr. Sterne said that he thought there was no question that freight lines were started originally as an economy, and that railroad officers availed themselves of them for their own private benefit; that then it developed into part ownership by the railroad, and finally resulted into the cooperative system, which is a better one.

CLASSIFICATION.

With regard to classification of freight, Mr. Blanchard said that among the circumstances that determined the class were the quantity and regularity of shipments, the bulk in proportion to weight, liability to damage, the method of packing as affecting such liability, the convenience of handling, and, to a great extent, competition. The latter had affected especially the classification of freights over the Pacific roads, the competition of ocean steamers compelling the placing of teas and silks into lower classes than in ordinary traffic. The change of an article from one class to another is equivalent to changing the rate on that article. Many articles are classed lower when the owner assumes the risk of loss and damage. Classifications are different in different parts of the country. On his road 159 articles were classed the same in the through and local classifications, but 147 were classed differently. So classification on goods imported from England may be changed to meet competition.

Mr. Sterne cross-examined Mr. Blanchard with a view to show that a higher classification or a higher rate on valuable goods was not justifiable because the cost of transportation might be no greater than for less valuable freights. Mr. Blanchard insisted that the value should be taken into consideration. It was worth more to the merchant to have a box of silk carried than a box of cotton.

The classification in force is the result of 25 years of the joint experience of the railroads and the shippers, there being frequent conferences with the merchants on this subject.

A request was made for a statement of the sums paid for damages on each class of goods, which Mr. Blanchard thought could not be obtained.

Mr. Blanchard then submitted the following table of all

ERIE & NORTH SHORE DISPATCH.—(Consolidated.)

New York, Sept. 25, 1879.

The vouchers of the managers for disbursements in August, 1879, amounting to \$27,634.20, have been examined and approved. The apportionment of each company is as follows:

RAILROAD COMPANY.	EARNINGS.		Expenses.	Over-charges.	Commis-sions.	Loss and Damage.	Lighter-age.	Total.
	West-bound.	East-bound.						
M. C. & R. R.....	\$12,058.15	\$3,020.35	\$1,593.89	\$2,488.34	\$27.28	\$15.89	\$148.84	\$4,206.82
G. W. Ry.....	10,615.65	14,583.89	832.33	1,128.19	139.87	16.11	118.60	2,232.10
C. S. Ry.....	5,136.93	29,399.99	994.45	1,113.38	62.85	3.82	84.03	2,238.53
G. T. Ry.....	2,922.72	17,284.30	680.63	684.49	79.48	4.22	79.04	1,519.84
N. Y. L. E. & W. R. R.....	31,419.92	76,176.87	3,553.69	6,098.52	513.48	82.69	527.95	10,776.31
Receiver Erie Ry.....	4,192.82	11,103.02	305.18	2,216.52	39.02	488.93	44.40	480.50
Wabash Ry.....	239.47	1,184.59	47.06	25.98		0.22	1.53	74.57
C. A. & D. R. R.....	13.06	62.79	2.42					2.42
E. T. H. & C. R. R.....	17.17	152.94	5.82					6.43
I. P. & C. R. R.....	925.94	18,375.30	637.35	132.27	5.35	2.90		777.26
L. V. R. R.....	294.65	706.06	32.98	10.43	85	08		44.92
N. Penn. R. R.....	15.40	5,630.73	186.40	101.06	4	11		287.71
Phil. & Reading R. R.....	892.95	1,497.96	79.06	119.10	7.13			215.39
Albany & Sus. R. R.....	1,824.63	4,807.42	219.00	2.34		31.64		253.23
Chic. & N. W. Ry.....	39.01	6,540.68	217.30	235.98	28		71	454.27
C. & A. R. R.....	389.04	314.32	23.28	6.80			42	33.50
C. M. & St. P. Ry.....	5.70	3,296.13	120.00	82				130.81
C. P. & S. W. R. R.....				11.33	70		4.19	16.18
T. P. & W. Ry.....				4.17	28		1.25	5.71
C. L. & C. R. R.....				980.00	96	12.03	4.40	997.48
Foreign roads.....								
Total.....	\$70,801.20	\$222,917.01	\$9,700.88	\$15,379.91	\$890.21	\$667.63	\$1,007.57	\$27,654.20

The General Manager of the Erie & North Shore Dispatch is authorized to draw at sight for the amounts above stated from the respective railway companies.

the regular rates from New York to Chicago (on which all other through west-bound rates are based) since 1861:

ALL-RAIL RATES, NEW YORK TO CHICAGO.
In cents per 100 lbs.

DATE.	CLASS.				
	1.	2.	3.	4.	Special.
Jan. 1, 1862	100	128	107	96	
April 7, "	149	117	85	75	
Oct. 29, "	180	150	124	75	
May 14, 1863	166	117	94	55	
Oct. 5, "	160	128	107	66	
Nov. 23, "	180	150	124	85	
July 25, 1864	200	166	111	85	
Sept. 20, "	215	180	120	82	
May 24, 1865	215	180	108	90	
Oct. 16, "	215	180	90	82	
Feb. 5, 1866	215	170	82	82	
March 5, "	188	160	127	82	
May 15, 1867	188	160	127	82	
Nov. 5, "	202	170	138	86	
June 4, 1868	178	160	127	82	
Aug. 10, "	149	128	120	82	
Sept. 7, "	188	160	127	82	55
Feb. 4, 1869	188	160	127	82	55
" 18, "	45	45	45	45	
" 24, "	40	40	40	40	
March 15, "	160	160	127	82	55
July 1, "	188	160	127	82	55
" 31, "	70	60	55	50	
Aug. 2, "	45	45	45	45	
" 4, "	40	40	40	40	
" 5, "	30	30	30	30	
" 7, "	25	25	25	25	
" 9, "	38	38	38	38	
" 23, "	43	43	43	43	
Sept. 22, "	40	40	40	40	
" 24, "	35	35	35	35	
" 30, "	30	30	30	30	
Oct. 4, "	50	50	50	50	
" 9, "	75	75	75	50	
" 13, "	125	100	75	65	
Nov. 1, "	140	125	100	80	
" 20, "	150	130	100	80	
June 13, "	112	90	70	55	
July 12, "	80	70	60	50	42 35
" 25, "	65	60	55	45	40 35
" 28, "	50	50	50	45	40 35
Aug. 12, "	50	50	50	50	40
" 22, "	100	90	70	55	45
Sept. 8, "	125	110	85	65	50
Nov. 28, "	100	130	100	65	
Dec. 26, "	180	150	120	80	
Feb. 20, 1871	150	130	100	70	55
March 9, "	100	90	70	55	45
May 18, "	75	65	50	45	37
June 28, "	45	45	45	45	30
July 16, "	40	40	40	40	28
" 28, "	45	45	45	45	30
Aug. 16, "	40	40	40	40	28
" 22, "	35	35	35	35	28
Sept. 2, "	30	30	30	30	24
Nov. 27, "	100	90	70	55	45
Dec. 15, "	125	110	85	65	50
Aug. 1, 1872	75	70	60	45	35
Sept. 2, "	100	90	70	55	45
Oct. 14, "	125	110	85	65	50
Apr. 14, 1873	100	90	75	60	45
July 21, "	75	70	60	45	35
Aug. 13, "	40	40	30	30	25
Sept. 17, "	75	70	60	45	35
Jan. 1, 1874	100	90	75	60	45
July 24, "	75	70	60	45	35
Jan. 20, 1875	100	90	75	60	45
March 17, "	75	70	60	45	35
Aug. 13, "	50	40	30	25	21
Nov. 15, "	75	70	60	45	35
Dec. 22, "	30	25	20	20	15
Jan. 10, 1876	75	70	60	45	35
June 2, "	75	70	60	25	25
" 12, "	25	25	25	16	16
Dec. 18, "	50	45	40	30	20
Mar. 12, 1877	75	70	60	45	35
Oct. 8, "	75	70	60	40	
" 22, "	100	90	75	45	
Dec. 10, "	100	80	60	45	
Feb. 15, 1878	75	60	50	40	

In 1870 while on the Baltimore & Ohio Railroad witness offered all sorts of inducements to bring freight to Baltimore. The flour exports for Brazil were sought by reducing flour rates east; and to get coffee in the other direction a new fifth class was made in 1868, with a rate of 55 instead of 82 cents per 100 lbs.

In making rates consideration is had of the representations of merchants, who are constantly discussing the subject with the railroad agents. Rates from New York are often made lower than the railroads like on the shipper's request, because of the competition at other cities. When the reduction on coffee and sugar was made from Baltimore to Chicago, although at that time the Baltimore & Ohio had practically no access to Buffalo, Detroit, Rochester and the Canadian cities, yet the other railroads had to reduce their rates to all these points in order to meet the Baltimore-Chicago rate, because Baltimore affected Philadelphia and Philadelphia did have access to Buffalo and the other cities named. At the close of the war there was an attempt to build up a great coffee trade with the Northwest at Mobile, and very low rates were made upon some cargoes received there. Although no one made complaint at that time that the trunk-line coffee rates were too high in themselves, yet the railroads were compelled to reduce those rates to meet the competition at Mobile. The improvement of the mouth of the Mississippi is likely to compel some further modification in rates, if sugar refineries are established there to give cargoes north to boats bringing grain south.

Mr. Blanchard submitted the "McGraham table," on which rates from New York to different places were formerly based, together with the modification of it adopted last June and published in the Railroad Gazette of June 20 last (page 336).

The making of west-bound rates was formerly affected by the agents of Western railroads in New York, of which there were 17, representing connections of the Erie, who would give notice that their lines would require an arbitrary rate from the junction points, or some other arrangement which modified the total rate from New York to the point of destination.

CUTTING RATES.

With regard to the motives for cutting rates, Mr. Blanchard said that when it seemed certain that rates would be reduced somewhere, one company would sometimes anticipate the reduction, hoping to prejudice shippers in its favor by being first in the market. Then the agents of Western railroads which received arbitrary rates on their own roads were greatly interested in getting cut rates on the freight to their own roads' eastern termini. The agent of the Chicago, Milwaukee & St. Paul road, for instance, in order to secure the larger share of the St. Paul business, while maintaining full rates on his own road could make a reduction to the shipper on the rate from New York to St. Paul if he could induce some line to accept less than the regular rate from New York to Milwaukee or Chicago, and to get such rate would go from one trunk line to another.

But if the St. Paul rate was reduced, business was affected at points lower down on the Mississippi, as at Rock Island, and the Rock Island merchant appealed to the agent of the Rock Island road to protect him, and so rates would finally be reduced all the way from St. Paul to St. Louis, and even to Memphis and New Orleans.

All this was bad; bad for the revenues of the roads, and bad for the merchant, who never could know when he made a contract for transportation whether his competitor would not get a better rate the next day, and the bad effects involved localities and way business. In nine cases out of ten the cutting was done, when on rates which were ostensibly pro-rated, by the agents of Western roads giving drawbacks, which they hoped in the general demoralization the trunk lines would be induced to share, and not by the officers of the trunk lines. Goods of one class were accepted as belonging to a lower class, and these merchants would sometimes misrepresent goods so as to secure a lower classification, and when a dishonest merchant did this, the honest merchant was in a manner forced to, as his customers would buy of the one who could lay down the goods at their destination for the least money. To these practices were due the secret drawbacks and vouchers, the railroads endeavoring to conceal from each other, and one road from another in the same line, the reductions which they were making to increase their share of the business. Then it became a question with the trunk lines how these evils should be remedied. It was solved by a division of the traffic in agreed proportions not only among the trunk lines, but among their Western connections. Thus the west-bound pool arose.

In answer to a question Mr. Blanchard said that when Western connections made an unauthorized rebate in hopes that the trunk lines would finally pay their proportion of it, the rebates usually were pro-rated.

To these practices the west-bound pool has made a complete end, which promises to be permanent. It has stood for 30 months and grown in strength all the time; the advantages are such that the roads are never likely to go back to their old method of doing business.

In answer to questions from Mr. Sterne, Mr. Blanchard said that when cut rates were made for east-bound freight they were always made by the Western connecting roads, when the freight passed over one. If the freight was sent by boat to Buffalo, the Erie road made the arrangement. It treated the Union Steamboat Company, though it owned nearly all the stock, precisely like a Western connection in this particular. The Erie had made special reduced rates from Buffalo to New York for grain in store there much lower than the local rate, and as much as half a cent lower than the through rate. This difference might determine whether the grain would go to New York and Philadelphia, but witness did not remember any case when Philadelphia, competition caused the reduction; it was generally the canal rate. Great grain houses in New York, like David Dows & Co., Jesse Hoyt & Co. and Bingham Bros., had been given special rates from Buffalo to New York of late years. They had never engaged the car facilities of the road for months ahead; they could not do that if they tried. All the contracts were for certain quantities, to be moved at the convenience of the road. The company never inquired whether the grain carried on such contracts belonged to the parties making the contracts, and had no means of knowing whether these parties farmed out part of their contracts to other people, except the reputation of such houses as David Dows & Co. He did not think it made any difference to the railroad whether the grain for a contract with one man for a thousand car-loads came from one person or fifty.

ORIGIN OF THE WEST-BOUND POOL.

Mr. Blanchard's testimony with regard to the origin and history of the New York west-bound pool is so interesting that we give it nearly in full:

"The state of affairs that I have outlined, of course, resulted in repeated conferences to see how we could stop it; agreements as to the maintenance of rates were broken up by the causes I have referred to; it therefore became clear that, inasmuch as the object of every company was to attract a certain amount of tonnage to one railroad or the other, if that certain amount of the tonnage could be fixed and given to one railroad or the other, without being under any obligation to this or that merchant, or to this or that railroad, the trunk lines would be wholly independent of all these disturbing elements, and could do it; several conferences were held looking to this plan, and as a little matter of retrospection, fourteen or fifteen months before the present plan was put in operation, I drafted and printed a plan (and by a coincidence Mr. Fink's name was suggested to occupy the same office that fourteen or fifteen months later he did fill). When I was in Europe in 1870, in June, the trunk lines had a final meeting upon this subject, and decided to put the plan in operation. Prior to that time, however, I should say that a meeting was held between the general traffic officers of the Baltimore & Ohio, the Pennsylvania, the New York Central and the Erie roads, in which it was discussed for nearly an entire afternoon as to the percentages that should be awarded to each company; the New York Central Company and ourselves agreed—and this a part of the history of the case never before made public—that whatever we might be able to get after an allowance to the Pennsylvania and Baltimore & Ohio roads, we would divide it equally; there were no statistics exhibited except of the most general character, and no value or importance was attached to them; and my recollection is, that we simply stated about the total amount of our total west-bound tonnage; but we found the periods to be dissimilar, and therefore they had no value; we therefore proposed that the Pennsylvania Railroad and the Baltimore & Ohio have 35 per cent., and the Erie and New York Central have 65 per cent.; and the meeting adjourned. After the adjournment, the ground was taken by both of us that there were but three trunk lines leading out of the city of New York; the Baltimore & Ohio road ended 200 miles from here, and it had no more right, in our judgment, to a percentage of the business than had the Lake Shore line, which ended 400 miles from here; that it was not, in any sense, a New York trunk line, and that it didn't even come to Philadelphia, and therefore, the divisions between the three railroads ought to be made alike, and that whatever amount the Pennsylvania Railroad saw fit to concede to the Baltimore & Ohio road out of its award was a matter with which we had nothing to do, and cared nothing; they might have more, or might have less; Mr. Guilford, present Vice-President of the Manhattan Elevated Railroad Company, was at that time the General Freight Agent of the Baltimore & Ohio Railroad, and he resisted these conclusions; but they nevertheless ultimately prevailed; but in the assignment of the fractions it was agreed that the New York Central and the Erie railroads were each to take 33 per cent., and when we agreed to that, we did not know whether the Baltimore & Ohio road was to have 2 or 10 per cent., until after the meeting. Mr. Cassatt stated that an arrangement had been arrived at by which they had agreed to take one-quarter of the whole, being 25 per cent., and as 34 per cent. had been the whole amount of the award, the Baltimore & Ohio took the remainder, that is, 9 per cent.; that is the manner in which the percentages were agreed to; now, commencing in July of that year—I think the first of July—Mr. Fink was called to the commission of the trunk lines.

"At that time, therefore, each railroad began to send in copies of its way-bills to Mr. Fink, and we then, for the first time, had reason to know the extent to which these percentages were actual or approximate; immediately every influence that had been at work for twenty years to break rates began to work to break down this pool—the public press, the merchants at both ends of the line, the contracting agents or clerks who thought that the successful carrying out of the scheme would wipe them out, every man who had enjoyed a drawback for twenty years and thought it ought to be continued, went at this thing for the purpose of breaking it up; it was stated in all our discussions that the probabilities were that the mercantile and railroad interests would concentrate for the purpose of making the Erie Company believe that the Central was giving a private rebate, or that the Baltimore & Ohio Railroad, having got only 9 per cent., if they would concentrate all their business on it, it would give it 20 per cent., and that would establish a basis for a new division, and that we would believe that the Baltimore & Ohio had cut these rates; that was distinctly considered prior to our going into it, and an arrangement made by the railroad companies that they would stand solid against that form of concentration to the extent that they possibly could; therefore, at the beginning of this system the Western railroads did not stop their drawbacks; on my return from Europe I had presented to me positive proof that a large number of the Toledo firms—seven, I believe—had been taken away from us by one of the old-fashioned cuts and sent over another road; I had proof that a number of citizens of St. Louis were being paid the old form of drawbacks, but we immediately gave notice that we would not participate in those drawbacks; in varying amounts, and on varying quantities of business, and at various seasons of the year, as the Western railroads were being influenced by the lakes or rivers, or by one cause or another—in the spring, when business was brisk, in January or February, when the spring trade began, or in August or July, when the fall trade began—all these means were used to break up this pool; I believe that during that time, and after a considerable amount of discussion, every one of the trunk lines, after this pool went into effect—not to a large extent, however—practiced some of these cuts, on the assurance of the parties that it would be the last; in the pool arrangements, however, we all discussed the fact that unless we made arrangements by which the west-bound business should be divided among the Western roads, as well as among ourselves, it still remained probable that the merchants of St. Louis might concentrate their traffic upon the Wabash, and that would make the Indianapolis & St. Louis, the Vandalia, and the Ohio & Mississippi roads just as jealous as ever; that they would commence to cut to get their customers—it might be a man who had stock in the road, and the very fact that he left them was proof that a different rate was being received; all these influences immediately began to work; we therefore called upon the Western roads to agree among themselves as to the proportions in which the business should be sent by us over their lines, and, I think, a year and a half ago, probably, the statement was made that these lines had at last agreed; we then, as a still further step in these pools, undertook to keep the statistics of the business by the different routes; and if we found that one of the lines was getting an excess beyond its proportion, we turned it over to some road that was getting less than its proportion, and said to the road that kept quiet, and didn't cut: 'Now, keep still; you will get your share of the business at full rates, and don't cut the rates, and we want you to keep quiet.' In some cases we succeeded; in others we did not; some Western companies would keep on doing this, and then it became necessary for us to say to A. B. of St. Louis, 'We will not send your goods in the way they are marked; and case after case has arisen in which the Commissioner has absolutely, and arbitrarily, turned away from every company over which the goods were originally directed the goods so directed; for example, if goods were sent by the way of New York Central, Canada Southern, and Wabash Railroad to St. Louis, an order might be issued to St. John's Park agency to send these goods by the Erie and Vandalia; so that if the party paid any drawbacks, he paid it without carrying the goods at all; that was followed by some of the notices. In some cases, undoubtedly, the party would pay the drawbacks without carrying the goods; because the merchant said: 'Now, I look to you; you must get the business over your road; you have agreed to do it, and if you don't you must pay anyhow,' and they were foolish enough to do it. We knew they were; and that is the reason we diverted the goods; when the goods went that way the railroad agents and consignees said, we must notify the railroad company that we will turn over the goods and hold them legally liable; the result was that for a long time they gave us goods under those notices; we had taken the precaution, prior to the formation of the pool, to submit to counsel the question as to whether if we gave a bill of lading, with a route optional to us, we would not fulfill all the obligations of the agreement by sending them over any route we saw fit. Therefore, such a bill of lading was prepared, by which we had a right to send the goods by any trunk line, or any one of our connecting lines; this is the condition; it is very brief: 'It being expressly understood and agreed, that in consideration of issuing this through bill of lading, and guaranteeing a through route, the New York, Lake Erie & Western Railroad Company reserves the right to forward said goods by any railroad line between the point of shipment and destination.' That gave us the selection of the line; these legal notices came in, and after a conference it was decided to pay no attention to them whatever; that we believed we were now four railroads united as one, carrying the business of the community, rather than each railroad fighting each other railroad, for the benefit of each shipper; that was the principle on which we acted. As the result of this trial (and it is the greatest revolution that has been accomplished in this country in the railroad business during twenty-five years—accomplished without law, and accomplished as the result of conference between the railroads); I do not know to-day of a drawback being paid, of any kind, upon any west-bound through freight, in which a connecting line is involved, by any of the trunk lines or its connections; we are now making this distribution among our connections; they see that we are determined to carry it out, and the gradual result will be the withdrawal of some of their New York agencies, in the stoppage of those expenses, the permission to carry the goods in any way that will get them to their destination soonest and best; but in doing this we consulted just as fully as consistent with these rules the wishes of the consignee; if at St. Louis, where there are five railroads, any party had any personal preferences—stockholding interests, the location of the warehouse, or anything else, and delivered his goods at New York, with directions that they go by the Indianapolis line to St. Louis, in the course of turning over this freight to the Erie, we take pains to send it by Buffalo, and by Indianapolis to St. Louis, so that the consignee will not be inconvenienced; but believing that our interests are the first that should be looked after, if that shipper combines with any other road to defeat our plans, and he is cutting rates, contrary to our rights, he knows that it is the practice of two years and a half, that the bill of lading itself gives us the right to do it, and we do exercise that right; those are the circumstances under which this New York pool was formed."

Steel-Cased Car Stove.

The engravings represent a stove which Mr. Gary, Superintendent of the Car Department of the New York Central & Hudson River Railroad, is making and using in the baggage cars of that road. The internal part is made of cast iron, excepting the cylindrical part above the fire-pot. This and the external casing are made of galvanized steel plates. The construction of the other parts of the stove is made clear by the engravings. It is a very neat and compact design for a stove, which is the reason for giving the engravings here. It is thought that in case of collision or other accident the steel casing would simply be crushed without fracture, and thus prevent the scattering of the fire. This feature will doubtless add very materially to the security of the stove, but what is needed is one made entirely of steel. The manufacturer who will do this first, and who will be able to supply the steel stoves at a reasonable price will doubtless meet with great success.

THE SCRAP HEAP.**Railroad Equipment Notes.**

The Wason Manufacturing Co., at Brightwood (Springfield), Mass., now employs about 1,000 men, and has orders enough ahead to keep the shops busy all winter.

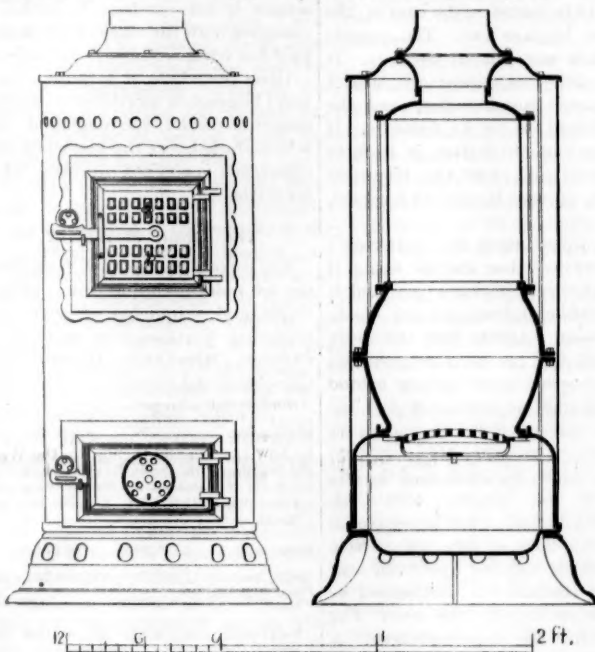
The Cambridge City (Ind.) Car Works have an order for 100 box cars for the Indianapolis, Peru & Chicago road.

N. Talcott, manufacturer of car axles and heavy shafting, at Springfield, Mass., has his shops fully at work, with orders ahead for more than 1,000 axles.

The New York, Lake Erie & Western shops, at Susquehanna, Pa., have orders to build eight new engines for the road.

The Laconia (N. H.) Car Co. is building 100 box cars for the Fitchburg Railroad.

McKee & Fuller, at Catasauqua, Pa., have an order for

**STEEL-CASED CAR STOVE.**

8,800 car-wheels for cars to be built by the Lehigh Car Manufacturing Co.

The car works at Middletown, Pa., have been sold to Mr. Michael Schall, who will start them up at once, and run them in addition to his present works at York.

The Boston & Albany shops, at Springfield, Mass., are to build five new locomotives and a number of freight cars for the road. The shops at Allston, Mass., are also building a number of new cars.

The Terre Haute (Ind.) Car Co. has an order for 200 coal cars for the Terre Haute & Indianapolis Road.

St. Louis papers report that the Pullman Palace Car Co. is about to build extensive shops in that city.

The Pennsylvania Railroad shops, at Altoona, are building some new gondola coal cars, the sides of which are made higher than usual, and they are expected to carry twenty tons of coal. Several of them were sent out on trial trips last week.

The New York, New Haven & Hartford shops in Hartford and New Haven, Conn., are to build 200 freight cars for the road. One hundred of them are to be short box cars on four wheels.

The Rogers Locomotive Works at Paterson, N. J., have an order for five ten-wheel freight engines, with 19 by 24 in. cylinders, for the St. Louis, Iron Mountain & Southern road.

Iron and Manufacturing Notes.

The Eureka Iron Co. has put its second furnace at Oxmoor, Ala., in blast, and is now making 80 tons of pig-iron a day in its two furnaces.

The Central Iron Works, at Harrisburg, Pa., are running full double turn on plate iron.

The Union Iron Co. is preparing to start up its rolling mill in Buffalo, N. Y., which has been closed for several years.

The Cleveland City Forge Co. has nine steam hammers at work and employs about 500 men. The company makes all kinds of forgings and has many orders for axles, draw-heads and similar work.

Port Oram Furnace, in Morris County, N. J., will soon go into blast.

The Glendower Iron Works, at Danville, Pa., are running on a large order for 50-lb. iron rails for a Western road.

The product of the Bessemer steel department of the Pennsylvania Steel Works for the month of October was 9,009 tons ingots; product of the blooming mill 9,249 tons blooms. During the month the rail mill made nine changes of rolls in working hours; nevertheless the product was 7,685 tons of finished rails, aggregating 166 miles. The week ending Nov. 1 was remarkable for heavy work, the product of the Bessemer department being 2,289 tons ingots, and the product of the rail mill being 2,102 tons rails. In twelve hours, Oct. 27, day turn, 212 tons rails (756 bars) were produced, and Oct.

30, the night turn produced 191 tons rails (766 bars), and Oct. 31, 193 tons rails (774 bars) in same time.—*Harrisburg (Pa.) Patriot.*

The property of the Rising Fawn Iron Co. in Dade County, Ga., is to be sold at public sale in Atlanta, Ga., Dec. 2, under a decree of foreclosure made by the United States Circuit Court. The property includes the Rising Fawn Furnace, several large tracts of coal and iron land and the mining right on other tracts.

The Edge Hill Iron Co. will put its furnace at Edge Hill, Pa., on the North Pennsylvania road, into blast shortly.

The old iron mine at Charlotteburg, Passaic County, N. J., on the New Jersey Midland road, has recently been sold to parties who intend to reopen it at once and work it extensively.

Buffalo Gap Furnace, near Staunton, Va., has been leased by the Ferrol Iron Co., and will soon be put in blast.

Prices of Rails.

For steel rails the market is reported irregular, with a sharp advance, and quotations are as high as \$60 to \$65 per ton at mill. One sale of 10,000 tons is reported at \$65, for delivery next spring. It is said that several parties are holding lots bought at lower prices, and can afford to sell below current quotations, but this supply must be limited.

Iron rails are also higher and firm at \$50 to \$52 per ton at mill for heavy sections, and \$53 to \$55 for light rails. Orders are numerous and urgent and the mills are loaded up with business.

Old iron rails are dull, with hardly sales enough to base quotations on in Philadelphia; a few small sales are reported at Pittsburgh at \$36 to \$38 per ton.

Bridge Notes.

The Penn Bridge Works, at Beaver Falls, Pa., have lately taken orders for five highway bridges in Massachusetts and New York.

The firm of Morison, Field & Co. has been dissolved, Mr. Morison retiring, and in its place the Central Bridge Co. has been formed. The new concern has its office at No. 52 Wall street, New York. The company is now at work on a number of contracts for bridges.

their leisure, with a choice of dishes from a bill of fare including soups, fish, entrées, roasts, joints, puddings, and fruits for dessert. After dinner the passenger may walk into the smoking-room to take his coffee and cigar. Leeds will be reached at 10 o'clock. The Pullman Palace Car Company invited a party of gentlemen to make a trial trip with the new dining car on Saturday, and among those present were Mr. Tennant, M. P.; Mr. Price Williams, C. E.; Mr. D. M. Yeomans, Manager of the Vacuum Brake Company, whose patent brakes are used on this line; Mr. H. Oakley, the General Manager; Mr. A. Forbes, the Secretary, and Mr. Robinson, Superintendent of the Great Northern Railway. Sir Andrew Fairbairn, one of the Yorkshire directors, returned with the party from Peterborough, where Mr. Tennant left them in order to proceed to Doncaster to represent the company on the reception of Prince Leopold, and to conduct his royal highness to Sheffield. The Pullman Palace Car Company was represented by Mr. A. Rapp, the Mechanical Superintendent; Mr. J. Miller, the Secretary, and Mr. H. S. Roberts, the Manager for the company in England. The work of the company's staff in this country has rapidly increased. There are now three English and three Scotch lines on which its sleeping and drawing-room cars are running, and the company appoints and pays the attendants in all these cars under arrangements similar to those made with the railway companies in the United States. A drawing-room car and the new dining-car were, with two or three ordinary carriages, run as a special train to Peterborough and back on Saturday. Leaving King's Cross at 12:30 p. m.; the run, 76 miles, was made in 1 hour and 30 minutes, and, after a stay of half-an-hour at Peterborough, the return trip was made in about the same time as the down trip. A light effect has been produced in the decoration of the interior of the car, by filling the panels of the ceiling with a veneer of white oak, on which a few simple flower subjects have been painted. The sides of the car are of American black walnut, ornamented with veneers of French walnut. The length of the car inside is about 52 feet, and the width about 8 feet. It was built by the Pullman Company at the works in Detroit, and cost about \$3,000.

The Auto-Lith. Printer.

This is the name given to an exceedingly cheap and simple apparatus for producing *fac-simile* copies of any work done with a pen, letters, circulars, tables, drawings, etc. A shallow tin pan, about one-half inch deep and of size a trifle larger than note, letter or foolscap sheets, filled with a cream-colored paste or jelly, is the entire apparatus. The manuscript to be duplicated is written with a thick copying ink, and is laid smoothly on the paste. When it is removed an indefinite number of copies can be made as rapidly as fresh sheets can be laid and pressed with the hand on the jelly. The duplicates are exact and clear, and with a little sense and judgment in the use of the process, it is a most valuable auxiliary. It is made by Charles F. Ketcham, maker of railroad and engineering stationery, No. 37 Nassau street, New York.

Chasing Deer by Rail.

A correspondent of the New York *Sun* of recent date says: "Yesterday morning, as the passenger train on the Honesdale Branch of the Erie Railway was approaching the Millville station, 10 miles from Honesdale, a large doe and a buck were seen by the passengers dashing down the mountain side toward the railroad. The road runs between the mountain and the Lackawaxen River, the latter being 25 feet below the road at that point. The doe jumped on the track ahead of the locomotive, and ran for several rods in front of it. Engineer Gardiner put on steam, and gained on the deer. The latter, to escape, leaped from the high bank into the river. She crossed the river, where some boatmen on the Delaware & Hudson Canal frightened her, and she recrossed the stream, and climbed again the railroad track in the rear of the train. The buck had stopped when the doe jumped on the track, but came out of the woods and joined her when she returned. The two then ran some distance along the track, and then disappeared in the woods."

Late Passengers.

A careful German, who believes in the value of statistics, and has plenty of spare time, has, by long and patient observation, ascertained the exact percentage of railway passengers that miss their train at the Vienna stations. Beginning his observations at a single station, he found that out of from 5,400 to 5,800 passengers leaving every day, one man, and from two to three women were the average number of late comers. Then he took in all the stations, and placed the number of tardy passengers at ten per day. Of every one hundred there were twenty-nine men and seventy-one women. The statistician was not surprised that the male sex should show to advantage, but the disproportion astonished him, when he reflected that many men are delayed by the fault of their wives, while the contrary seldom occurs. More people miss local trains than express trains, the proportion being as three to one. In winter the number of these unfortunates is least, and in the warm months of July and August it is greatest.

A Strange Accident.

An accident occurred on a local railroad on the 10th inst. that is probably without a parallel in the history of railroad—in Illinois, at least. As a train on the evening of that day was near Glasford, going at a speed of nearly 40 miles an hour, a cow suddenly bounded in front of the engine. There was no warning whatever. The front of the engine passed over the animal, and in doing so was lifted clear of the rails and uncoupled from the tender. Going at such a high rate of speed, it continued some twenty yards on the ground, tearing it up and even uprooting a stump in its mad career, and, what is very strange, kept on its wheels until it came to a stand-still, where it stood clear of the main track. The remainder of the engine and train kept the track and ran past the engine about a quarter of a mile, when it was brought to a stop with brakes. The jar of the escaped engine was so slight that but few passengers were made aware of the accident until told. The engineer sat on his seat throughout the affair, a mere spectator of the queer freak of his engine. No one was hurt nor even scared.—*Keokuk (Ia.) Gate City, Oct. 26.*

A Squelched Traveler.

Occasionally you will meet a young man who gets on the train somewhere in Ohio, and when some fellow passengers ask him how far he is going, he will say, "Omaha!" in the tone of a brakeman calling a station, and then look up and down the car to observe the amazement and awe of the other passengers, and you will notice that he looks a little bit disappointed because they do not take off their hats and ask to shake hands with him, and want to know where he comes from and all about him. But by-and-by when he learns from casual remarks dropped carelessly now and then, that the man behind him is going to San Francisco, and the one in front of him is going to Japan, and the old fellow on the other side of the aisle is just returning from St. Petersburg, the young man drops his voice to a husky whisper, shrinks down into his duster so that no one can see him, and tells the next man who asks him about it that he is only going out here a little ways.—*Burlington Hawkeye.*

Railroad "Booms."

Little roads have their "booms" as well as big ones. An exchange informs us that the — & — road has ordered two new box-cars, and the passenger-car is to be newly painted and richly decorated.

Indiana breathed freely for a time when a circuit court decided the "whistling law" unconstitutional. But now the Supreme Court reverses that decision, and holds the law valid; the railroad companies have renewed their orders requiring due observance and plenty of whistle at every crossing, and the whole state has its fingers in its ears.

A correspondent wants to know if it can be called a "throw" train when it is thrown from the track.

A lady living in a distant state, who lost her wraps at the Michigan Central depot and had them restored by Mr. Underwood, ticket agent of the Wabash, sends that young gentleman a closely written letter of five pages, with innumerable postscripts, setting forth all the details of her homeward trip and reiterating her gratitude in feeling and sentimental terms. In conclusion she artlessly and incidentally alludes to the fact that her husband was called from earth about three years ago. As Mr. Underwood is young and fascinating, but somewhat inexperienced, we may perhaps be pardoned for inviting his attention to the very sage advice which the elder Weller gave to his erratic son Samuel.—*Detroit Post and Tribune.*

Some of the boys who have been ringing the signal bell near the Whiting railroad crossing (in Holyoke, Mass.) were caught the other day and pretty thoroughly frightened, and since then there has been no trouble. The boys would drop a heavy stone on the fixture designated for the locomotive wheel to strike. This would set the bell ringing, and the noise would keep up till a train came along or till some one stopped it, while the teams, fearing to cross, would stand and wait a long time for the expected train, the boys meantime enjoying the fun all by themselves.—*Springfield Republican.*

Boys will be boys, but automatic signals don't allow for them.

American Dining Cars in England.

The London *Times* of Oct. 20 says: "The Pullman Palace Car Co., under arrangements with the Great Northern Railway Company, will on Nov. 1 begin to run one of their dining-room carriages between Leeds and King's Cross Station, London. As this will be attached to a fast train, leaving Leeds at 10 in the morning, the manufacturers and merchants of that town having business in London will be able to get a substantial luncheon in comfort on the way up. Arriving at 2 o'clock, they will have three hours clear for business in the city, and leaving King's Cross on the return journey at 5.30 in the afternoon, they will be able to dine at



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EDITORIAL ANNOUNCEMENTS.

PASSENGER.—All persons connected with this paper are forbidden to ask for passes under any circumstances, and we will be thankful to have any act of the kind reported to this office.

Addresses.—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

Advertisements.—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns OUR OWN opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

Contributions.—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

RISK OF HAND-BAGGAGE.

There is notable variety, even conflict, in the views entertained by courts of justice of the risk as to hand-baggage carried by travelers. The valises, hand-bags, watches, pocket-books, over-coats and the like, which the passenger does not surrender to be checked, but carries with him, are these to be deemed in his own charge so that the carrier has no concern about them, or is the carrier liable for a theft or loss on the ground of a duty to exercise oversight of the whole vehicle and protect all things on board, however carried? Or is there some half-way rule? The question is one on which the rule ought to be uniform throughout the country. And the conditions are not so different as to railroad and steamboat travel as to warrant a different rule for the two modes. Yet there is a very inconvenient uncertainty overhanging the subject. As respects railroads, viewed alone, the few decisions are not grossly inconsistent; but if steamboat cases are also taken into view, the law needs improvement.

A recent and important railroad case was decided last year in the New York Court of Appeals, and is very recently reported. It turned upon the value of the property lost, which the court held was excessive. The circumstances were: That Mr. Weeks arrived in New York, by New York & New Haven train, early one morning in 1871. At that day, the locomotive left the cars at Forty-second street, and they were drawn by horses down to the Twenty-seventh street depot. The car in which Weeks was brought was left for a short time standing in Fourth avenue, awaiting the bringing up of the horses, and without any guard of brakemen or other employés. Weeks was carrying upon his person a package of United States bonds to the value of \$16,000. Three men entered the car as Weeks was coming toward the door to leave it, assaulted him with violence, robbed him of the bonds and ran away unhindered by the company's agents. His action against the company for the loss has been decided against him in both courts, on the ground that \$16,000 is too much for a passenger to carry and expect the company to care for. The jury found that Weeks was not negligent in his manner of carrying the bonds,

and that the company was negligent in allowing rowdies access to the car; yet the Court of Appeals says that any liability of the company arising on these facts must be limited to such reasonable and moderate sums as a railroad company naturally expect passengers to carry for expenses of their journeys. The companies are not required to take precautions as if passengers generally had fifteen or twenty thousand dollars in their pockets.

An opposite aspect of the hand-baggage question was presented in a Georgia case where the passenger's valise contained gold coin and securities to the value of \$87,000. He carried it by hand, instead of having it checked; but on arriving at his destination the conductor demanded \$40 as freight upon the money. Passenger refused to pay; and conductor took the bag away from him, claiming that the company had a lien on the baggage for the charges. And the court so decided; and said that although the passenger carried the bag himself yet it might be retained for freight; that whatever is carried into the passenger cars as baggage is deemed to be in possession of the conductor so far as to authorize him to assert a lien upon it. It is not easy to see why possession of a bag of gold which is sufficient to sustain a claim for freight and a lien for payment is not sufficient to create a carrier's liability. There was, however, in Ireland, a railroad passenger who took into the passenger car with him a case of gold and silver watches. In the course of the journey the guard came and told him it was contrary to the rules of the company for him to be carrying the case in the coach, it must go into the luggage van. The passenger submitted, and the box was put in the van. It was a case which showed by its appearance that it probably contained valuable merchandise, and the owner made no concealment as to its contents. It was stolen before the time came to deliver it back to the owner at the end of the trip. And the House of Lords held it was his loss, because it was not baggage, but merchandise.

Some of the cases have turned upon the passenger's failure to take good care of his valise, and no doubt if he assumes to carry his things in his own care and is negligent, that is a complete defense to any claim against the company. In an English case the story was that the traveler left the car at a refreshment station to get lunch, leaving his portmanteau behind him. On returning to the train he could not find the car he was previously in, and concluded it must have been taken off. This was a mistake; the car went through, but the passenger rode the residue of the trip in another one. He did not, however, obtain his portmanteau for a good while, and, when he recovered it, a part of the contents had been stolen. In a New York case a passenger laid his overcoat upon the seat by his side, and when he reached his destination he forgot to take it with him, on leaving the cars. The train went onward, bearing the neglected coat. A friendly fellow passenger pointed it out to the conductor, but that official took no care of it till the train reached the terminus, when he sent a brakeman to secure it. But meantime it had been stolen, perhaps by the friendly passenger; no one knows. In both these instances the courts held that the companies were free of any claim, because the passengers had been careless.

Some cases, in late years, particulars of which we have given in a former article, have turned upon the peculiar arrangements of the palace or drawing-room car companies; and the decisions have been that these companies are not liable for hand-baggage; they are not regarded as either carriers or innkeepers, but simply as owning conveniences which they let to travelers for use on the journey; and they do not profess to take any charge of the things the passenger carries in his hand—these are at his own risk. But in a very recent case in which the passenger was shrewd enough or lucky enough to have sued the railroad company instead of the sleeping-car company, he recovered. He was a holder of a through ticket from Boston to San Francisco. Also he bought a ticket to ride in the sleeping car "China." At Toledo, where the train stopped for dinner, he asked an employé if he should leave his bag in the car while he went to dinner, and was answered: yes, it will be perfectly safe. But when he returned he found the "China" had been exchanged for another car, and in the change his bag was lost forever. The court said that here the loss was due to the negligence of the company's men in changing the hand-baggage in the absence of the passengers, and that whether the company owned the "China" or it belonged to some sleeping-car owners made no difference; that was a private arrangement among the companies, with which passengers are not concerned.

Quite a number of instances have occurred, in which hand-baggage has been lost or stolen from state-rooms upon steamboats; and they have been very differently

decided. It is not very easy to see any marked difference between steamboat and railroad law, on this point.

In one of the steamboat instances two ladies traveling on a Mississippi River boat left a hundred dollars worth of jewelry, which they wore in traveling, in a hand-bag, in the state-room, while they went to supper. They did not lock the door, and the valuables were stolen out of the bag while they were gone. The judge said the boat was not liable. He took no notice of any carelessness in the matter of leaving the door unlocked, but said that steamboat-owners are only responsible as carriers for the things given into the charge of the baggage men. Three instances have occurred upon ocean steamers. In one of them a steerage passenger's money and jewelry were stolen out of a little trunk which he carried in his own care under his berth. In the other two the passenger's watch or clothing was stolen out of his state-room; but he complained that there was no key, and he could not lock the door. The decisions were that the steamers were not responsible for state-room baggage, unless, in the particular case, the loss was due to negligent arrangements or management on the part of the steamer. Upon the other hand, in three or four instances of state-room robberies upon inland steamboats, the judges have said in substance that the companies are just as much carriers of what the passenger puts in the state-room as they are of what goes into the baggage crate or of the passenger himself, and that if the passenger is not careless, locks his door properly, and complies with the rules of the boat, he is entitled to be paid for what is stolen from his room.

Upon the whole, it is quite clear that if a loss of hand baggage is ascribable to negligence of either passenger or carrier, the negligent party is liable. But which should bear the loss when there was no fault on either side is a vexed question which ought to be better settled.

The Grain Movement for Ten Months.

The reports of the New York Produce Exchange for the ten months ending Nov. 1 show the following receipts and shipments of grain and flour at the eight reporting Northwestern markets (St. Louis, Peoria, Chicago, Milwaukee, Duluth, Detroit, Toledo and Cleveland) and receipts at the seven Atlantic ports:

Northwestern Receipts:				
	1879.	1878.	1877.	1876.
Flour, bbls.	5,615,347	4,624,001	3,986,427	4,588,757
Grain, bush.	209,735,834	196,559,561	145,140,731	151,443,244
Flour to grain.	28,079,735	23,120,005	19,943,785	22,943,785
Total bush.	237,815,569	219,679,566	165,078,516	174,387,029
Northwestern Shipments:				
	1879.	1878.	1877.	1876.
Flour, bbls.	6,149,845	4,894,589	4,210,655	3,965,424
Grain, bush.	175,430,037	155,930,051	122,017,392	134,007,356
Flour to grain.	30,749,225	24,472,945	21,053,275	19,827,120
Total bush.	206,179,262	180,402,996	143,070,637	153,834,476
Atlantic Receipts:				
	1879.	1878.	1877.	1876.
Flour, bbls.	9,017,334	7,885,664	6,546,113	8,175,428
Grain, bush.	245,689,421	214,301,988	133,918,948	140,260,397
Flour to grain.	45,086,070	39,428,320	32,730,565	40,877,140
Total bush.	290,706,091	253,730,308	166,649,513	181,137,537

The percentages of increase in 1879 over previous years have been:

	1878.	Over.	1876.
In Northwestern receipts.	8.2	44.0	30.5
In Northwestern shipments.	14.3	44.1	34.9
In Atlantic receipts.	14.9	74.5	60.5

The gain in Northwestern receipts over last year is not a very large percentage, it appears, but the gain over the two previous years is immense.

The increase in the interior movement may be judged from the growing excess of Atlantic receipts over the shipments of Northwestern markets, as shown below:

	Northwestern shipments.	Atlantic receipts.	Latter more than former.
1876.	153,834,476	181,137,537	27,303,061
1877.	143,070,637	166,649,513	23,578,876
1878.	180,402,996	253,730,308	73,327,312
1879.	206,179,262	290,706,091	84,526,829

In 1876 the Atlantic receipts were about 18 per cent. more than from the eight reporting Northwestern markets, in 1877 16½ per cent., in 1878 40½, and in 1879 41 per cent. more.

If we were to take grain alone, the excess of Atlantic receipts over shipments of Northwestern markets would be still more striking. It was but 4.7 per cent. in 1876, but rose to 9.7 in 1877, 37.4 in 1878, and 41 per cent. in 1879.

The receipts of grain of all kinds (not including flour) at the seven Atlantic ports for the ten months ending Nov. 1, have been, in bushels:

	1879.	1878.	1877.	1876.
New York.	112,278,150	107,971,411	61,923,455	59,833,359
Boston.	17,655,257	15,691,457	11,525,427	10,909,840
Portland.	1,110,529	1,603,932	889,843	1,887,642
Montreal.	13,478,566	12,427,430	11,875,728	11,492,948
Philadelphia.	40,118,925	33,235,761	17,621,959	20,672,675
Baltimore.	50,545,435	34,167,600	23,656,384	24,072,624
New Orleans.	9,784,190	9,152,951	5,245,327	4,834,036
Total.	244,987,197	214,250,515	134,038,123	189,729,124

The percentage of the total received at each port in the several years was as follows:

	1879.	1878.	1877.	1876.
New York.....	45.8	50.4	46.2	42.8
Boston.....	7.2	7.3	8.6	7.8
Portland.....	0.5	0.7	0.7	1.4
Montreal.....	5.5	5.8	8.8	8.9
Philadelphia.....	16.4	13.5	13.4	19.1
Baltimore.....	20.6	16.0	17.6	17.2
New Orleans.....	4.0	4.3	4.7	3.5
Total.....	100.0	100.0	100.0	100.0

New York's proportion is thus considerably larger than in 1876, but smaller than in the other two years.

Comparing the percentages of New York with those of Baltimore and Philadelphia taken together, we have:

	1879.	1878.	1877.	1876.
New York.....	45.8	50.4	46.2	42.8
Philadelphia and Baltimore.....	37.0	31.5	31.0	36.3
The three cities.....	82.8	81.9	77.2	79.1

The two last-named places have thus received a slightly larger proportion this year than in 1876, even.

Philadelphia, however, had a much larger proportion in 1876, and the gain has been wholly by Baltimore.

Compared with 1878, only Philadelphia and Baltimore have gained in percentages, and nearly the whole gain in at Baltimore, which has had an enormous contribution of winter wheat from the Ohio valley.

Taking New York and Boston together and comparing with Philadelphia and Baltimore together, we have:

	1879.	1878.	1877.	1876.
New York and Boston.....	53.0	57.7	54.8	50.6
Philadelphia and Baltimore.....	37.0	31.5	31.0	36.3
The four cities.....	90.0	89.2	85.8	86.9

Montreal might be expected to increase faster than Boston, because it receives chiefly for export and Boston chiefly for domestic consumption (including distribution to United States sea-ports); but Boston has come much nearer maintaining its position during the two past years of plenty than Montreal has.

The only place showing a decrease in receipts since last year is Portland; leaving that out of the calculation entirely, we have an increase in the receipts of the six other ports amounting to 31,224,000 bushels. Of this increase, 4,307,000 bushels, or 13.8 per cent., went to New York; 1,964,000, or 6.3 per cent., to Boston; 1,011,000, or 3.2 per cent., to Montreal; 6,883,000, or 22 per cent., to Philadelphia; 16,428,000, or 52.6 per cent., to Baltimore, and 631,000, or 2.0 per cent., to New Orleans. Thus about three-fourths of the whole increase has gone to Philadelphia and Baltimore.

It will be worth our while to compare the business since harvest by itself. The winter and spring business for two years past at least has been made very irregular by the competition of the railroads. It is, of course, impossible to say that any one line or any one port has gained or lost by this action, for it is impossible to say what line did the most cutting. But if we are ever to learn what the effects of the existing differences of rates are, we must confine our comparisons to periods when rates were actually maintained. We give below the receipts of each port during the three months of August, September and October, but do not claim that these illustrate the movement at regular rates. Most of the receipts in August were probably at irregular rates, and certainly at very low ones. The quantities received at the three ports in these months have been as follows for four years:

	1879.	1878.	1877.	1876.
New York.....	50,797,623	48,427,776	35,779,415	22,873,546
Boston.....	6,344,887	5,187,491	4,874,421	4,321,979
Portland.....	110,250	137,423	159,250	349,200
Montreal.....	8,109,113	6,755,282	8,091,950	5,755,569
Philadelphia.....	13,455,525	11,355,631	8,407,119	9,158,525
Baltimore.....	19,335,075	12,346,100	8,234,300	7,210,200
New Orleans.....	2,357,125	1,174,954	1,366,076	930,831
Total.....	100,509,123	85,384,677	66,913,531	50,610,850

The percentages of the leading ports for these three months were:

	1879.	1878.	1877.	1876.
New York.....	50.5	56.7	53.3	45.2
Boston.....	6.3	6.1	7.3	8.5
Montreal.....	8.1	7.9	12.1	11.4
Philadelphia.....	13.4	13.3	12.6	18.1
Baltimore.....	19.2	14.5	12.3	14.2

New York generally reaps the greatest benefit from the canal after July, when the harvest is likely to be hurried forward to get the advantage of low water-rates. But the shipments by canal have not increased very greatly this year, as the stock of boats has not been increased recently; thus while every rail route increases its business with the increase of the movement, the canal route is nearly stationary, and as New York is the sole outlet of the canal, it suffers by this even when its railroads carry their full proportion of the business.

If we take the two months of September and October, during which by far the greater part of the grain paid full rates on the railroads (all except some taken on old contracts), we find that New York carried 51.9 per cent. of the whole, Baltimore 19.5 per cent. and Philadelphia 11.4 per cent.—a better showing for New York than when rates were low, but just as good for Baltimore, and worse only for Philadelphia. Yet it is

during this period that the Baltimore & Ohio has been getting much the largest amount of grain out of Chicago that it ever obtained there.

The exports of flour, wheat and corn (little other grain is exported) from the four leading ports for the ten months ending Nov. 1, have been as follows for the past two years, flour in barrels and grain in bushels:

	1879.	1878.	Inc. or Dec.	P. c.
New York.....	3,491,983	2,159,200	Inc. 1,332,783	61.7
Baltimore.....	367,729	503,371	Dec. 135,642	37.0
Philadelphia.....	130,647	158,264	Dec. 27,617	16.8
Boston.....	642,270	317,414	Inc. 324,856	105.5
Total.....	4,632,638	3,138,255	Inc. 1,494,383	47.6
Wheat:				
New York.....	55,376,900	46,065,068	Inc. 9,311,832	20.2
Baltimore.....	28,162,280	15,935,381	Inc. 12,226,899	80.0
Philadelphia.....	16,123,438	6,420,926	Inc. 9,702,512	151.1
Boston.....	3,892,907	3,023,694	Inc. 869,213	28.8
Total.....	103,555,585	71,445,069	Inc. 32,110,516	45.6
Corn:				
New York.....	30,506,019	24,331,633	Inc. 6,174,386	25.4
Baltimore.....	18,865,547	15,852,119	Inc. 3,013,428	19.0
Philadelphia.....	12,970,616	18,761,576	Dec. 5,790,960	30.9
Boston.....	6,201,566	5,860,152	Inc. 341,414	5.8
Total.....	68,543,778	64,805,480	Inc. 3,738,298	5.8

Reducing flour to wheat and taking the aggregate of flour, wheat and corn, we have the following exports from each port:

	1879.	1878.	Increase.	P. c.
New York.....	103,342,834	81,192,731	22,150,103	27.3
Baltimore.....	48,860,472	34,004,355	14,856,117	43.7
Philadelphia.....	29,747,289	25,973,822	3,773,467	14.5
Boston.....	13,305,958	10,470,916	2,835,042	27.1
Total.....	195,262,553	151,641,824	43,620,729	28.8

Of the total increase of exports, amounting to 43,620,729 bushels, a little more than half went from New York, a little more than one-third from Baltimore, 8.7 per cent. from Philadelphia and 6.5 per cent. from Boston.

It is noticeable that New York and Boston make enormous increases in flour exports, and very much smaller ones in wheat exports, and on the other hand the tremendous increases of 80 and 151 per cent. in wheat exports at Baltimore and Philadelphia are accompanied by decreases in flour exports.

Another peculiarity is the great decrease in corn exports from Philadelphia, while there was a very large increase at New York, and a large one at Baltimore.

Boston, it will be seen, makes the greatest percentage of gain in flour shipments, and this year stands next to New York in this particular. The percentage of increase in total flour exports is even a little greater than that in wheat exports, which is somewhat remarkable, and indicates a large increase in the milling capacity.

The percentage of the total exports shipped from each port in the two years has been:

	New York.	Baltimore.	Philadelphia.	Boston.
1878.....	53.6	22.4	17.1	6.9
1879.....	53.0	25.0	15.2	6.8

The gain of Baltimore in rank has been mostly at the expense of Philadelphia; but the changes are none of them so great as might be supposed from the bare statement that Philadelphia's wheat exports have increased 151 per cent., or Boston's flour exports by 105 per cent. The aggregate increase has been so very large that no place could hold its rank without making a very large gain. New York, we see, loses rank a little in spite of an increase of 27 per cent. in exports, amounting to more than 22,000,000 bushels.

Foreign Railroad Notes.

The iron "boom" has reached Belgium, where prices for certain qualities of iron have probably been lower than anywhere else in the world. The government, some weeks ago, offered to let contracts for 12,000 tons of steel rails. The offers, which we noted at the time, were about \$25 per ton of 2,204 lbs. For some time previous the government had been getting rails for \$21 or less, and the Minister of Public Works, thinking \$25 too high, declined all the bids and called for new ones. About the middle of October the new bids were opened, and they ranged from \$26.90 to \$27.35 per ton, and the amount bid for only just covered the 12,000 tons, so that the highest as well as the lowest bids will have to be accepted. The advance from Sept. 3 to Oct. 15 had been about 2.13 cents per ton. Only one foreign steel works, a German one, ventured to bid, and it asked \$27.94 for the whole quantity to be let. At the same time a lot of old rails was sold in Belgium for \$21.34 a ton.

While maintaining firmly that in railroads generally uniformity should not be sought, but that each should be adapted expressly to its peculiar situation and surroundings, and that uniformity tends to put an end to all improvement, Baron von Weber says there are a few important exceptions, the chief of which is the construction of freight cars. It is, he says, of little importance whether any improvement in springs, wheels, axles, or car bodies be introduced compared with the ability of the car to circulate freely from the Black Sea to the Baltic, from the Atlantic to the Russian border, from Brindisi to Hamburg, and to be taken care of and repaired at points far distant from each other, which is only practicable when there is uniformity in all the chief points of construction. In France and England, he says, the practical sense of the railroad men has led them deliberately to neglect many important improvements in details of construction for the sake of uniformity.

Few even of those closely connected with the disposition of railroad rolling-stock have an adequate idea of the small proportion of time that cars are actually engaged in moving over the roads and how much more is required for loading and unloading, switching, waiting at stations and in yards, inspections and repairs. In Prussia, a few years ago, statistics showed that the average time occupied in running by a freight car was 21 days out of 365. Prussian industries require an exceptionally large proportion of short hauls, and this is unfavorable to making a large mileage per car; but in Austria where the hauls are largely of grain, timber, coal and ores hauled long distances, the average car-mileage per year requires but 28 days of actual running time. We do much better than that here, but after all, our own cars are standing still most of the time.

Baron von Weber, considering the argument that a large amount of administrative expenses might be saved by the concentration of the railroads of a country into the hands of the government, declares that there is a limit to the economy caused by such concentration, and says that experience shows that the savings in certain directions are accompanied by greater expenses in other directions; and that a system as large as the large companies of England and France—say 2,500 to 3,000 miles—is all that a single administration is likely to manage economically and effectively, and he supports his opinion by statistics showing that as railroad systems have grown the proportion of their expenses to earnings has generally increased, and that it has increased most where the systems have grown most.

Twelfth Annual Report of the Master Mechanics' Association.

This report has just been issued in the usual form of the annual volume which this Association publishes, excepting that the binder has trimmed it $\frac{1}{8}$ inch shorter and $\frac{1}{4}$ inch narrower than last year's report. It may not be generally known that binders are the most infuriating class of men which publishers have dealings with. It seems as though no binder can ever make two books of exactly the same size. This is however of very little practical importance, as there is sufficient margin left for binding the volumes of uniform size. The report this year contains 184 pages. The last one had 240.

As very full abstracts of the reports of this year have been published in these pages since the last annual meeting, very little comment seems needed. The successive volumes which this Association has issued now form quite a little library and furnish the most conclusive evidence of the usefulness of this Association.

Record of New Railroad Construction.

This number of the *Railroad Gazette* contains information of the laying of track on new railroad lines as follows:

Burlington & Missouri River in Nebraska.—Track on this company's *Nebraska Railway* is extended from York, Neb., west to Aurora, 23 miles.

Chicago & Northwestern.—Track on the *Chicago & Dakota Branch* is extended from Lake Benton, Minn., westward to Volga, Dak., 36 miles.

Louisville, New Albany & St. Louis.—Extended from Princeton, Ind., east to Francisco, $8\frac{1}{2}$ miles.

Chicago, Bellevue, Cascade & Western.—Extended from La Motte, Ia., westward to Zwinglie, 6 miles. Gauge 3 feet.

Gulf, Colorado & Santa Fe.—Extended from Richmond, Tex., westward 15 miles.

Texas & St. Louis.—Extended southwest to Sulphur Fork, Tex., 18 miles. Gauge, 3 feet.

Pittsburgh & Western.—Extended from Etna, Pa., southwest to Allegheny, 5 miles. Gauge, 3 feet.

Nashville & Tuscaloosa.—Extended from Bon Aqua Springs, Tenn., southward to Graham, 11 miles. Gauge, 3 feet.

Saginaw & Mt. Pleasant.—Extended southwest to Mt. Pleasant, Mich., $5\frac{1}{2}$ miles, completing the road. Gauge, 3 feet.

This is a total of 128 miles of new railroad, making 2,987 miles thus far this year, against 1,777 miles reported for the corresponding period in 1878, 1,867 in 1877, 1,931 in 1876, 1,128 in 1875, 1,594 in 1874, 3,228 in 1873, and 5,982 in 1872.

SIR HENRY TYLER'S SPEECH at the Grand Trunk meeting in London, Oct. 30, was largely given to controversy over statements made by the Great Western people at the time the fusion of the two companies was pending, and was less interesting to the American public than his speeches generally are; for they are generally exceedingly interesting and full of information concerning American railroad business. But the speech made the important announcement of the securing of the Grand Trunk's line to Chicago, for which Sir Henry Tyler and his Canadian officers may justly take to themselves a good deal of credit. It is possible that too much is expected of the new line. The Grand Trunk has been generally (not recently, it claims) free to get all the business it could at Chicago, forwarding it over the Michigan Central, but we believe that never when any records were kept has it secured more than $3\frac{1}{2}$ per cent. of the Chicago shipments. But the new road will not need to get a heavy traffic in order to be a valuable acquisition. It was secured just at the most favorable time, when prices were lowest, all but some 30 miles of it being formed of badly bankrupt roads, whose securities until recently were worth but a trifle, but which would probably sell for two, three or four times as much now. The Grand Trunk got a majority of the bonds of the Indiana section of the Peninsular Railway for $12\frac{1}{2}$ cents on the dollar; the Port Huron-Flint section of the new line (69 miles) cost it

about \$300,000. The 49 miles from Flint to Lansing, was secured by paying Mr. Vanderbilt \$540,000 for the securities by which he controlled it (and this, we imagine, gives Mr. Vanderbilt the first dividend ever paid by any part of the new line); the 108 miles of the Peninsular Railway from Lansing to the Indiana line cost \$300,000, and a contract was let for 30 miles from Valparaiso, Ind., to Thornton, Ill., for \$375,000. The entrance into Chicago is to be over the 20 miles of the old Chicago & Southern road, which was built for the Chicago, Danville & Vincennes, and was bought by the Grand Trunk, or for it, no less than two years ago. The expenditures so far just about exhaust the \$1,500,000 received from the Dominion government for the Rivière du Loup line. Sir Henry Tyler says that \$1,000,000 more in the next six months will be all that will be needed to get the road into good working order, and \$2,500,000 is the utmost that can be needed, in addition to the \$1,500,000 already spent, to make the most full and perfect arrangements. This will make the cost of the whole line from Chicago to Port Huron, 330 miles, only \$4,000,000, or about \$15,000 per mile. The road will use the Chicago stations of another railroad.

THE OBSTACLES TO A CHANGE IN A SYSTEM OF WEIGHTS AND MEASURES are well illustrated by the recent action of the New York Produce Exchange concerning the adoption of the cental system for buying and selling grain. It would seem that nothing could be simpler, and the great differences in the weights of bushels of different kinds of grain—oats 32 lbs., corn 56, wheat 60, etc.—made it extremely desirable to get rid of the old bushel system, which is not by any means a system of measures, for everywhere it is a given weight which makes a legal bushel. The railroads have never made rates by the bushel, but always by the 100 lbs., or "cental," though competing with the lake and canal boats, whose rates are fixed per bushel. So the grain-dealer has always had to use the cental system to a great extent in getting his grain carried. Then it is a simple matter to make tables which show at a glance the equivalents of any given number of bushels in centals, and vice versa, and the Produce Exchange had such tables prepared beforehand, with the values of different quantities at different prices, so that the passage from one system to another could be made with the least possible friction; while the largest exports are made to Liverpool, where grain has been sold by the cental for some years. Yet the members of the Exchange found so much difficulty in accommodating their business to the new system that they were almost unanimous in favor of abandoning it before they had fairly tried it. Their experience was almost precisely like that of the Chicago Board of Trade some ten years ago, which voted, unanimously, we believe, in favor of adopting the cental system on a given day, but when the day arrived, after trying to work under it, voted just as unanimously to go back to their old practice, before the day's session ended.

Of course the difficulties are made much greater because the change was made at one place in the country which had constant relations with thousands of others where no change was made; but in exchanges where important transactions must be effected without a moment's hesitation, the evil of a lack of familiarity with a system of measures is most emphasized. Probably, so far as this is concerned, in the grain trade two weeks' experience would have made the cental system perfectly familiar; but the difficulty is to induce men to discommode themselves even for so short a period, when the interests concerned are of very great importance, and transactions amount to several millions of dollars in a single week.

A TABLE OF WEST-BOUND RATES SINCE 1861 is one of the valuable things given in the abstract of Mr. Blanchard's testimony, which we publish this week. One might suppose that such lists would be easy to get, and that they would be kept in the office of every railroad interested in through business. But some years ago, when we endeavored to get this information, we could find but two offices where it was kept, and in one of these it did not go back so far as 1861; and we could find but one office in America which had preserved records of east-bound rates going back of 1870. It must be remembered, however, that this record gives only regular rates. There were long periods when there were no regular rates. No one, so far as we know, has ever made a record showing the prevailing rates during railroad wars. Of course it is not possible to state the rates precisely at such times, because there may be several rates the same day. But each railroad ought to know what it got for the freight which it carried—that is, it ought, to finally, very frequently it does not at the time it is carrying it, and before all the vouchers for "rebates" and "overcharges" have come in—and a record made upon that basis would have a good deal of historical value. We can understand how one might be ashamed to have the record for certain periods known; but though a railroad's rivals may not know just how much grain it carried at the rate of 10 cents per 100 lbs. from Chicago to New York, they are pretty sure to know if it did any carrying at such rate.

THE IMPORTANCE OF THE FREIGHT IN HOG PRODUCTS may be judged by the record of the shipments from Chicago during the year ending with October last. The aggregate weight of the shipments of pork, lard, hams, shoulders and sides was 1,099,018,931 lbs., which would fill 45,792 cars with the full load of 24,000 lbs. each. That number of cars coupled together into a continuous train would cover 286 miles of track, or the whole length of the Michigan Central Railroad from Chicago to Detroit. The weight is the same as that of 18,816,989 bushels of wheat. Grain is

the only freight hauled great distances which greatly exceeds in amount provisions. Neither is equal to coal; but very little coal, comparatively, is carried by rail more than three hundred miles, and very little indeed the 913 to 1,040 miles which most of the Chicago provisions go. The cotton crop is probably moved as great distances altogether, but not by rail, as most of that which is exported goes to a near-by port, and a good deal of that which goes North for consumption. But it is questionable whether the whole cotton crop equals the provisions in weight. The weight of hog products packed during the year ending with February, 1878, was reported to be 2,500,000,000 lbs., and the weight of the cotton crop of 1878 (which was the largest ever known) was less than 2,400,000,000 lbs. Chicago shipments during the year ending with October last were equal in weight to nearly half the cotton crop.

OCTOBER EARNINGS have been reported thus early by no less than 23 railroads, all but one of which show an increase as compared with last year, when traffic, except with Northwestern spring-wheat roads, was generally very good. In many cases, too, the increases are very large.

General Railroad News.

MEETINGS AND ANNOUNCEMENTS.

Meetings.

Meetings will be held as follows:
Baltimore & Ohio, annual meeting at Camden Station, Baltimore, Nov. 17.
Connecticut Western, annual meeting, at the office in Hartford, Conn., Nov. 18. Only the preferred stockholders have votes.

Dividends.

Dividends have been declared as follows:
Cleveland & Pittsburgh (leased to Pennsylvania Company), 1½ per cent., quarterly, payable Dec. 1.
Wilmington & Weldon, 3 per cent., semi-annual, payable Nov. 22.

Mail Service Extensions.

Mail service has been ordered over railroad lines as follows:
Burlington & Missouri River in Nebraska.—Service ordered over the extension of this company's Nebraska Railway from York, Neb., to Aurora, 23 miles, from Dec. 1.
Chicago & Northwestern.—Service ordered over the Chicago & Dakota Branch from Tracy, Minn., by Balaton, Tyler, Lake Benton, Verdi, Aurora and Brookings to Volga, Dak., 70.94 miles, from Dec. 1. Also over branch of Maple River road from Wall Lake, Ia., to Sac City, 13.98 miles, from Dec. 1.
Chicago, Milwaukee & St. Paul.—Service extended on Iowa & Dakota Division from Pattersonville, Ia., to Canton, Dak., 28 miles, from Nov. 17.

Foreclosure Sales.

The New Jersey Midland road is advertised to be sold in Jersey City, N. J., Nov. 29, under a decree of foreclosure and sale granted by the Court of Chancery of New Jersey. The notice of sale is only formal, however, and it is not likely that the road will be sold until after the Court of Appeals has passed upon the various appeals taken from the Chancellor's decree.

Southern Railway & Steamship Company.

The fifth annual meeting was held in Atlanta, Ga., Nov. 5, pursuant to adjournment, with President Joseph E. Brown in the chair and Charles A. Sindall Secretary.

There were present Virgil Powers, General Commissioner, and the following railroad officials:

For the Central, Southwestern, Savannah, Griffin & North Alabama, Mobile & Girard, Montgomery & Eufaula railroads, and the Ocean Steamship Company, Savannah & Boston and Savannah Steamship Company, William Rogers, General Superintendent; W. G. Raoul, General Superintendent.

For the Georgia Railroad, E. P. Alexander, President; E. R. Dorsey, General Freight Agent.

For the Nashville, Chattanooga & St. Louis, E. W. Cole, President; George R. Knox, General Freight Agent.

For the South Carolina Railroad, J. H. Fisher, Receiver; J. B. Peck, Superintendent; L. B. Pickens, General Freight Agent.

For the Wilmington & Weldon and Wilmington, Columbia & Augusta, R. R. Bridges, President; A. Pope, General Freight Agent.

For the Carolina Central, C. H. Roberts, General Manager; F. W. Clark, General Freight Agent.

For the Northeastern, of Georgia, J. W. Edwards, Superintendent.

For the Western & Atlantic, Hon. Joseph E. Brown, President; Gen. Wm. McRae, General Manager, and R. A. Anderson, General Freight Agent.

For the Port Royal & Augusta, D. C. Wilson, President; R. G. Fleming, General Superintendent; J. S. Davant, General Freight Agent.

For the Macon & Brunswick, G. S. Jones, General Director.

For the Brunswick & Albany, Charles S. Schlatter, General Superintendent.

For the Raleigh & Augusta Air-Line, Raleigh & Gaston, Seaboard & Roanoke, Baltimore Steam Packet Company, and Canton Inside Line, J. C. Wyder, General Superintendent, and H. L. Poor, General Freight Agent.

For the Old Dominion Steamship Company, W. H. Stanford, General Freight Agent.

For the Atlanta & Charlotte Air-Line, R. D. Carpenter, General Freight Agent.

For the Merchants & Miners' Transportation Company, William Plummer, General Agent; James B. West, Savannah agent.

For the East Tennessee, Virginia & Georgia, C. M. McGhee, Vice-President; James R. Ogden and T. S. Davant, General Freight Agents.

For the Atlanta & West Point, L. P. Grant, Superintendent; A. J. Orme, General Freight Agent.

For the Savannah & Charleston, C. S. Gadsden, Superintendent; S. O. Boyleston, General Freight Agent; C. C. Olney, Agent.

For the Richmond & Danville, and Charlotte, Columbia & Augusta railroads, A. S. Buford, President; T. M. R. Talbot, General Superintendent; Sol Haas, General Freight Agent.

For the Louisville & Nashville, F. De Funiak, General Manager; E. B. Stahlman, General Freight Agent; Theodore Welch, General Agent.

For the Greenville & Columbia, F. K. Huger, General Freight Agent.

For the Baltimore & Richmond Steamship Company, George F. Needham, General Freight Agent.

For the Philadelphia & Savannah Steamship Company, W. L. Jones, General Agent.

For the Clyde Line Steamships, J. G. Eager, General Freight Agent.

For the Western, of Alabama, Cecil Gabbett, General Manager.

For the Atlantic, Mississippi & Ohio, Henry Fink, Receiver; Thomas Pinkney, General Agent.

For the New York & Charleston Steamship Company, Geo. W. Quintard, President.

For the Rome Railroad, E. Hillyer, President.

For the Great Southern Freight Line, B. D. Hasell, General Agent, and J. M. Selkirk, General Agent west.

General Commissioner Virgil Powers submitted his annual report, which was read by the Secretary. A number of amendments were also read, which, with the report, were submitted to a special committee for consideration. The Association then adjourned until the next day.

On the reassembling of the convention, Nov. 6, the Special Committee, to which the General Commissioner's report and sundry amendments had been referred, reported progress, and asked further time for consideration.

It was then resolved to adjourn until Dec. 16, at Augusta, Ga. At that time the report of the Special Committee will be presented, and officers will be chosen for the ensuing year.

Michigan Association of General Passenger & Ticket Agents.

A regular monthly meeting was held in Grand Rapids, Mich., Nov. 6. There were present Henry J. Wentworth, T. J. Whitney, Michigan Central; S. R. Calloway, Detroit & Bay City; J. B. Milliken, W. A. Carpenter, J. F. Reekie, Detroit, Lansing & Northern; J. P. Nourse, Flint & Pere Marquette; J. F. McClure, Detroit, Grand Haven & Milwaukee; A. B. Leet, J. M. Metheany, Grand Rapids & Indiana; A. M. Nichols, Chicago & Western Michigan.

The principal business under consideration was the renewal of the agreement for the year 1880. This was effected, and the standing rules were continued for next year also, the only change being to increase the allowance for baggage of commercial travelers from 150 to 250 pounds. The rules relating to half-fare permits for ministers and editors were readopted without change.

Engineers' Club of Philadelphia.

The first fall meeting of the club was held Oct. 4 at its new rooms, No. 1,518 Chestnut street. Mr. Ernest Pontzen, of Paris, was chosen a corresponding member, and Messrs. Frank Lyman, J. W. Edwards, William Forsyth, George C. Thomas, John Haug, E. B. Wall and Charles S. Heller active members.

At the regular meeting Oct. 18 Rudolph Hering gave some account of the works and cement of the Coplay Cement Co. Chas. A. Ashburner read some notes on the "Eames Petroleum Fudding Process"—a method of utilizing petroleum as fuel. He said that ten barrels of crude oil sufficed for making 15 tons of iron per day.

Mr. Rudolph Hering exhibited a set of detail drawings of the works for improving the sewerage of Boston. Mr. Charles Darrach presented some notes on "Meyer's Formule for Proportioning Culverts on Railroads," in which he discussed a paper previously presented by Mr. Cleeman.

At the meeting Nov. 1, Prof. L. M. Haupt read a report on the progress of the Pennsylvania geodetic survey, which Professor Haupt is directing.

ELECTIONS AND APPOINTMENTS.

Bellaire & St. Clairsville.—The Belmont County (O.) Court has appointed C. W. Carroll Receiver, on petition of the bondholders.

Boston, Hoosac Tunnel & Western.—The following circular from President Burt is dated Nov. 1:

"A. A. Gaddis, Esq., has been appointed General Manager of the Boston, Hoosac Tunnel & Western Railway Company. Office, room No. 60, Equitable Building, Boston, Mass."

Boston, Winthrop & Pt. Shirley.—At the annual meeting in Boston, Oct. 28, the following directors were chosen: Clarence A. Parks, Wakefield, Mass.; Samuel G. Irwin, Winthrop, Mass.; Francis French, Keene, N. H.; Frank H. Hills, John M. Wales, Boston. The board elected Clarence A. Parks, President; Frank H. Hills, Clerk.

Chicago & Northwestern.—Mr. V. M. Came is appointed General Agent of this company, with office at Denver, Col.

Chicago, Milwaukee & St. Paul.—Mr. D. Flanagan, Assistant Superintendent of the Racine & Southwestern Division, has been made Superintendent of the Davenport Line, in place of John E. Henry, resigned.

The Chicago Inter-Ocean of Nov. 10 says: "Ever since John C. Gault accepted the position of General Manager of the Wabash Road it has been a matter of conjecture who would become his successor as Assistant General Manager of the Chicago, Milwaukee & St. Paul road. It is now definitely settled that Mr. W. C. Van Horne, General Superintendent of the Chicago & Alton, is to have the position. He will assume the duties of his new office Jan. 1, 1880. Mr. Van Horne is an excellent railroad man, admirably adapted for the position."

Cincinnati, LaFayette & Chicago.—At a recent meeting of the board the following officers were chosen: M. E. Ingalls, President; Gustavus Ricker, Vice-President; E. F. Osborn, Secretary and Treasurer. Mr. Ricker is re-elected. Mr. Ingalls succeeds Adams Earl, and Mr. Osborn, J. M. Kerper.

The following appointments are announced: Superintendent, J. W. Sherwood, Indianapolis; General Ticket Agent, John Egan, Cincinnati; Assistant General Freight Agent, J. M. Johnson, LaFayette, Ind. The office of Auditor is abolished.

Mr. B. Lyman is continued as General Passenger Agent, Mr. J. B. Morgan as Master Mechanic, and Mr. F. J. Kelly as Road-Master. The new officers are all also officers of the Indianapolis, Cincinnati & LaFayette.

Eastern.—Mr. Daniel W. Sanborn has been appointed Master of Transportation, in place of John Hornby, resigned. Mr. Sanborn has been on the road some 20 years, the last 10 years as conductor.

Mr. F. H. Miles, late Chief Train Dispatcher, is appointed Superintendent of Telegraph, in place of Mr. W. H. Vaughan, who has gone to the Chicago & Alton.

Georgia Railroad Commission.—The new Railroad Commissioners of Georgia held their first meeting in Atlanta, Nov. 11, and organized by electing ex-Gov. James M. Smith President, and R. A. Bacon, of Atlanta, Secretary.

LaFayette, Bloomington & Muncie.—Mr. E. St. Andrews has been appointed Purchasing Agent, in place of B. F. Mastan, resigned.

Mackinac & Marquette.—Mr. Thomas McKeown has been appointed Chief Engineer, and has his office at Marquette.

Mich. He was recently connected with the Hamilton & Northwestern road.

Manhattan Elevated.—At the annual election in New York, Nov. 12, the following directors were chosen: William R. Garrison, Cyrus W. Field, George M. Pullman, Ashbel Barney, Jose F. Navarro, Benjamin Brewster, Horace Porter, Nathan Guilford, Robert Harris, John Baird, Heber R. Bishop, George J. Forrest and Josiah M. Fiske. Messrs. Harris, Bishop, Forrest and Fiske are new directors, the number being increased from nine to thirteen.

Marquette, Houghton & Ontonagon.—Mr. John Hornby has been appointed Land Commissioner. He was recently Master of Transportation of the Eastern Railroad.

Missouri, Iowa & Nebraska.—Mr. Arthur Williams has been appointed Auditor, in place of O. H. Mackreth, resigned.

New York, Connecticut & Eastern.—The direction of this new company have chosen the following officers: President, George L. Clarke, Providence, R. I.; Secretary, Andrew L. Winton, Bridgeport, Conn.; Treasurer, Wm. W. Douglas, Providence, R. I.

Philadelphia, Newtown & New York.—This company has been reorganized by the resignation of the old officers and the election of the following: President, Col. James Boyd; Directors, A. D. Campbell, Franklin Dundore, S. Henry Morris, A. H. Seipt, John Shingluff, Charles H. Stinson; Secretary, George A. Rahm; Treasurer, Smith Harter. The road is now controlled by the Philadelphia & Reading.

Richmond & Petersburg.—It is stated that Mr. Theodore D. Kline has been appointed Superintendent, in place of A. Shaw, resigned. Mr. Kline is now Superintendent of the Charlotte, Columbia & Augusta road.

St. Louis & San Francisco.—Mr. A. Douglas, lately appointed Acting Auditor, is made Auditor from Nov. 6.

Wabash, St. Louis & Pacific.—This consolidated company was organized at Toledo, Nov. 7, when the following directors were chosen: To serve one year, Julius S. Walsh, Thomas E. Tutt, St. Louis; James Cheney, Ft. Wayne, Ind.; J. Lowber Welsh, Philadelphia; Henry H. Cook, New York. For two years, Charles Ridgely, Springfield, Ill.; George N. Dunlap, Chicago; James F. Joy, Detroit; Sidney Dillon, Solon Humphreys, New York. For three years, Benjamin W. Lewis, Jr., St. Louis; A. L. Hopkins, Toledo; Cyrus W. Field, Jay Gould, Russell Sage, New York.

The board elected officers as follows: President, Cyrus W. Field; First Vice-President, B. W. Lewis, Jr.; Second Vice-President, A. L. Hopkins; General Manager, John C. Gault; Secretary, James F. How; Treasurer, W. B. Corneau; Second Secretary and Transfer Agent, O. D. Ashley; Executive Committee, Cyrus W. Field, Solon Humphreys, Jay Gould, Russell Sage, A. L. Hopkins, Sidney Dillon. Messrs. Field, Hopkins and Corneau were officers of the Wabash; Messrs. Lewis and How of the St. Louis, Kansas City & Northern; The Executive Committee is entirely composed of old Wabash directors, except Mr. Dillon, who was not in either of the old companies. The President and Second Vice-President will have their offices in New York; the First Vice-President and the General Manager in St. Louis.

PERSONAL.

—Mr. O. H. Mackreth has resigned his position as Auditor of the Missouri, Iowa & Nebraska road, and will go into business in Minneapolis, Minn.

—Mr. Adams Earl, the builder and until recently chief owner of the Cincinnati, La Fayette & Chicago road, has resigned his position as President of the company, having sold out his interest in the property.

—Mr. A. Shaw has resigned his position as Superintendent of the Richmond & Petersburg Railroad.

—Mr. B. F. Mastan, Purchasing Agent of the La Fayette, Bloomington & Muncie, has resigned on account of ill health.

—Mr. Frank J. Hecker has resigned his position as General Superintendent of the Eel River Railroad, the road having been leased to the Wabash. Mr. Hecker has managed the road very successfully for several years, having gone to it from the Ulster & Delaware.

—Mr. John E. Henry has resigned his position as Superintendent of the Davenport Line of the Chicago, Milwaukee & St. Paul. He managed the road for several years as Receiver, and afterward as General Manager for the Davenport & Northwestern, before that company sold the road to its present owners.

—Mr. Richard Bernard Lewis, for many years a well-known engineer, died at his residence in Quincy, Ill., Nov. 2. He was born in Chester County, Pa., in 1825, and in 1845 entered the service of the Pennsylvania Railroad as a civil engineer, and remained there until 1852, when he became Chief Engineer of the Vicksburg & Meridian road. After serving on that road several years and completing its construction, he was for a short time on the Hoosac Tunnel, but afterward went south, where he located and built several lines. In 1864 he went back to the Pennsylvania for a short time, and was then chosen President of the Huntingdon & Broad Top Company. He left that position to take charge of the St. Louis, Vandalia & Terre Haute, and some ten years ago settled in Quincy. He was Chief or Consulting Engineer on the Carthage Branch of the Chicago, Burlington & Quincy; the Quincy, Alton & St. Louis, and the Atchison Branch of the Hannibal & St. Joseph, and assisted Captain Eads in the location of the St. Louis Bridge. For several years past he has lived quietly in Quincy, undertaking no professional work, on account of impaired health.

—Messrs. H. H. Trowbridge, Master of Transportation; H. W. Mead, General Freight Agent; A. J. Chandler, Auditor, and J. M. Kerper, Secretary and Assistant Treasurer of the Cincinnati, La Fayette & Chicago, are all retired by the transfer of the control of that road to parties interested in the Indianapolis, Cincinnati & La Fayette, being succeeded by officers of that company.

—Mr. Isaac A. Livermore, a well-known citizen of Cambridge, Mass., and of Boston, died in Pittsfield, Mass., Nov. 9, at an advanced age. He was for 25 years Treasurer of the Michigan Central Company, retiring from that position in 1875.

—The case of Frank Abbott, on trial at Newburg, N. Y., for embezzling money from the insurance association connected with the Brotherhood of Locomotive Engineers, has gone over for another term. It is said that he has made a settlement, and that the case will not be brought to trial.

TRAFFIC AND EARNINGS.

Water Rates.

Lake rates have been pretty steady during the week ending with Wednesday at 7 cents per bushel for corn and 7½ for wheat from Chicago and Milwaukee to Buffalo; but there have been several quotations from Milwaukee at ½ cent less, and Wednesday the rate was but 7 cents for wheat.

Canal rates have advanced, but are still below the highest rates of October. At first the advance was almost exclusively on corn, but Wednesday the rates were 9 cents for corn and 10½ for wheat, from Buffalo to New York, which is an advance during the week of ½ cent on wheat and 1 cent on corn.

Ocean rates have tended downward for grain, and Wednesday's quotations by steam from New York to Liverpool were 6½d. per bushel. Charters of sailing vessels to Cork for orders are reported at 6s. from Philadelphia, 6s. 8d. and 6s. 6d. from Baltimore, and 5s. 9d. from Boston. A vessel was chartered to carry rails from New York to Portland, Oregon, at \$10 per ton.

Railroad Earnings.

The following are reports made to the Massachusetts Railroad Commission for the year ending Sept. 30, 1879:

	Earnings.	Expenses.	Net earn.	Earn. per ct.
Boston & Maine.....	\$2,216,390	\$1,254,750	\$961,510	10.758
New London Northern.....	477,065	329,544	147,521	4.771
New York & New England.....	1,971,536	1,447,183	524,353	8.018
Old Colony.....	2,802,576	2,147,006	714,970	7.952

Old Colony expenses include \$343,450 payments resulting from the Wollaston accident.

Other earnings have been reported as follows:

Ten months ending Oct. 31:	1879.	1878.	Inc. or Dec.	P. c.
Atchison, Top. & S. F.....	\$5,088,040	\$3,171,348	I. \$1,916,692	60.4
Bur. Cedar Rap. & No.....	1,210,960	1,273,407	D. 62,537	4.9
Central Pacific.....	14,426,098	14,637,049	D. 210,351	1.4
Chicago & Alton.....	4,587,984	3,931,193	I. 656,491	16.7
Chicago & East. Ill.....	704,957	672,460	I. 32,497	4.8
Chl. Mil. & St. Paul.....	7,847,000	6,926,038	I. 920,962	13.3
Chicago & N. W.....	13,252,920	12,511,060	I. 741,390	5.9
Chicago & West. Mich.....	496,504	415,327	I. 81,177	19.5
Grand Trunk.....	7,420,425	7,469,495	I. 10,970	0.1
Great Western.....	3,675,965	3,821,634	D. 145,669	3.8
Hannibal & St. Jo. Ill.....	1,338,060	1,658,965	D. 120,866	7.3
Ill. Central, Ill. lines.....	4,550,501	4,004,105	D. 44,604	1.0
Ill. Central, Iowa lines.....	1,100,246	1,292,476	D. 192,230	7.2
Mo. Kansas & Tex.....	2,576,200	2,450,651	I. 125,600	5.1
Mobile & Ohio.....	1,498,263	1,309,693	I. 189,180	14.4
St. L. A. & T. H. Bellefonte Line.....	444,282	406,435	I. 37,847	9.3
St. L. Iron Mt. & So.....	3,068,853	3,510,715	I. 458,138	13.0
St. Louis & San Fran.....	1,241,086	987,316	I. 253,770	25.7
St. Louis & S. E.....	603,840	530,261	I. 84,579	12.0
St. Paul & Sioux City.....	908,355	892,770	I. 15,585	1.7
Tol. Pe. & Warsaw.....	1,025,138	1,065,770	D. 40,632	3.8
Wabash.....	4,171,220	4,210,818	D. 39,598	0.9

Eight months ending Aug. 31:	1879.	1878.	Inc. or Dec.	P. c.
N. Y. Lake Erie & Western.....	\$10,388,848	\$9,735,228	I. \$653,320	6.7
Net earnings.....	2,761,729	2,854,254	D. 92,525	3.2

Month of August:	1879.	1878.	Inc. or Dec.	P. c.
N. Y. Lake Erie & Western.....	\$1,450,223	\$1,445,929	I. \$4,294	0.3
Net earnings.....	591,237	569,804	I. 21,433	3.8

Month of September:	1879.	1878.	Inc. or Dec.	P. c.
Boston & N. Y. Air Line.....	\$26,867	.....	.....	.....
Net earnings.....	17,952	.....	.....	.....

Month of October:	1879.	1878.	Inc. or Dec.	P. c.
Atchison, Top. & S. F.....	\$759,000	\$446,528	I. \$312,472	70.0
Bur. Cedar Rap. & No.....	171,524	141,619	I. 29,905	21.1
Central Pacific.....	1,833,000	1,773,089	I. 59,911	3.4
Chicago & Alton.....	654,286	487,921	I. 167,365	34.3
Chl. & Eastern Ill. Chl. Mil. & St. P.....	92,975	85,000	I. 10,639	12.4
Chicago & N. W.....	1,200,000	825,722	I. 499,278	56.0
Chl. & West. Mich. Denver, So. Park & Pac.....	44,827	36,861	I. 7,966	21.6
Hannibal & St. Jo. Ill. Cent., Ill. lines.....	132,186	228,411	D. 96,225	2.4
Mo. Kan. & Tex.....	580,244	508,751	I. 71,493	14.5
Mobile & Ohio.....	170,832	148,080	I. 22,753	15.4
Northern Pacific.....	387,701	349,809	I. 37,893	10.8
St. L. A. & T. H. Bellefonte Line.....	294,400	71,700	I. 192,690	268.8
St. Louis & San Fran.....	287,000	152,200	I. 134,800	88.6
St. Louis & S. E.....	63,127	50,548	I. 6,579	11.6
St. Paul & Sioux City.....	713,200	583,963	I. 129,237	22.1
Tol. Pe. & Warsaw.....	213,712	123,808	I. 89,904	72.5
Wabash.....	71,001	11,036	I. 60,000	16.4
Wisconsin Valley.....	119,596	128,351	D. 8,755	6.8

Week ending Oct. 31:	1879.	1878.	Inc. or Dec.	P. c.
Great Western.....	132,372	104,500	I. 27,872	26.7
Union Pacific.....	1,543,580	1,209,870	I. 273,710	21.6
Wabash.....	663,923	517,613	I. 146,310	28.3
Wisconsin Valley.....	27,228	21,491	I. 5,737	26.7

Week ending Nov. 1:	1879.	1878.	Inc. or Dec.	P. c.
Grand Trunk.....	\$220,978	\$186,977	I. \$34,001	18.2

Grain Movement.

For the week ending Nov. 1 receipts and shipments of grain of all kinds at the eight reporting Northwestern markets and receipts at the seven Atlantic ports have been, in bushels, for the past seven years:

Year.	Northwestern receipts.	Northwestern shipments.	Atlantic receipts.
1879.....	3,424,384	3,395,098	616,814
1878.....	2,412,374	2,412,374	292,512
1877.....	4,251,118	4,579,686	1,154,484
1876.....	4,308,747	3,902,672	2,351,914
1875.....	5,071,098	3,827,013	587,178
1874.....	4,893,449	4,088,021	905,027
1873.....	7,190,708	4,443,656	1,390,490

The receipts at Northwestern markets for the week are somewhat smaller than for the preceding week, but still enormous. Of them 52.3 per cent. was at Chicago, 15.3 at Milwaukee, 10.1 at Toledo, 9.9 at St. Louis, 5.8 at Peoria, 2.6 at Duluth, 2 at Detroit and 2 per cent. at Cleveland.

The shipments from these markets were a little smaller than the week before, and considering the great bulk of the receipts were very small indeed, which, in view of the advance in rail rates announced long beforehand and the near approach of the close of navigation indicates either a remarkable condition of markets—prices too high in the West to permit shipments to the East at a profit—or a great scarcity of cars and vessels. All railroad men know that there is a scarcity of cars, though the shipments from these markets are not extraordinary. But the arrivals of grain to the sea-board are extraordinary, which proves that the cars are getting their grain elsewhere than at the eight Northwestern

markets named. But this does not explain the small lake shipments: for two weeks they have been but about 3,000,000 per week, while in the two weeks previous more than 5,000,000 bushels per week were taken by the vessels. The weather may have something to do with this. Sometimes the winds delay the vessels greatly, so that few arrive at the upper lake ports for cargoes. Moreover, there is now a very great pressure for lumber and ore shipments, though perhaps no more in these two weeks than before. At all events, the demand for lake vessels in this time did not increase enough to raise lake rates, even after an advance in rail rates had been announced.

The receipts at Atlantic ports are the smallest for five weeks, but still they were never exceeded in any previous year except once. The October receipts this year have averaged 8,085,000 bushels per week, and there has never been anything to compare with it heretofore.

Of the receipts at Atlantic ports in this last week 53.7 per cent. was at New York, 17.3 at Baltimore, 11 at Philadelphia, 7.3 at Montreal, 6.6 at Boston, 4 at New Orleans, and 0.1 per cent. at Portland.

San Francisco grain shipments for October were 3,800,000 bushels.

For the week ending Nov. 11 (Tuesday), receipts and shipments at Chicago and Milwaukee were, in bushels:

	Receipts.	Shipments.
Chicago.....	2,877,290	2,561,071
Milwaukee.....	887,900	612,500
Total.....	3,765,190	3,173,571

For the same week Buffalo received 3,323,750 bushels by lake and 699,300 by rail, and shipped 2,976,405 bushels by canal and 1,348,137 by rail. The receipts were more than double those of the corresponding week last year.

For the same week, ending Nov. 11, the preceding week and the corresponding week last year receipts at the four leading Atlantic ports were, in bushels:

	Nov. 11, 1879.	Nov. 4, 1879.	Nov. 12, 1878.
New York.....	3,797,824	3,894,132	2,204,428
Baltimore.....	1,212,294	942,236	679,791
Philadelphia.....	488,700	496,900	551,000
Boston.....	580,793	440,719	234,100
The four ports.....	6,085,611	5,743,087	3,600,319

All the ports but New York show an increase over preceding week, and all but Philadelphia a great increase over last year. New York receipts were 62.4 per cent. of the total for the week, against 67.8 per cent. for the preceding week, and 60.1 per cent. for the corresponding week last year. Of the New York receipts for the week 1,111,028 bushels—29.3 per cent.—were by rail.

Coal Movement.

Coal tonnages for the ten months ending Nov. 1 are reported as follows, the tonnage in each case being only that originating on the line to which it is credited:

	1879.	1878.	Inc. or Dec.	P. c.
Anthracite:				
Philadelphia & Reading.....	6,254,215	4,105,740	I. 2,148,475	52.3
Northern Central, Shamokin Div. and Summit Branch R. R.....	777,035	634,191	I. 142,841	22.5
Sunbury, Hazleton & Wilkesbarre.....	20,604	26,070	D. 5,466	21.0
Pennsylvania Canal.....	301,600	305,173	D. 3,573	28.3
Central of N. J. Lehigh Div.....	3,354,004	1,861,877	I. 1,492,127	87.1
Lehigh Valley.....	3,580,241	2,648,529	I. 931,712	31.4
Pennsylvania & N. Y. Delaware, Lacka. & West.....	28,741	26,647	I. 2,094	7.9
Del. & Hudson Canal.....	3,143,303	1,732,906	I. 1,410,707	81.4
Del. & Maryland Canal.....	2,808,100	1,719,022	I. 1,089,178	61.4
Pennsylvania Coal Co.....	1,187,592	728,310	I. 459,282	63.1
State Line & Sullivan.....	40,110	28,802	I. 11,314	39.3
Total anthracite.....	21,585,647	13,817,390	I. 7,768,257	56.2

	1879.	1878.	Inc. or Dec.	P. c.
Semi-bituminous:				
Cumberland, all lines.....	1,251,841	1,392,793	D. 140,952	10.1
Huntingdon & Broad Top.....	118,082	125,583	D. 7,501	6.0
East Broad Top.....	53,751	51,200	I. 2,551	5.0
Tyone & Clearfield.....	1,390,728	1,090,965	I. 299,763	21.4
Bellefonte & Snow Shoe.....	53,271	20,782	I. 32,489	156.2
Total semi-bituminous.....	2,807,673	2,686,423	I. 121,250	4.5

	1879.	1878.	Inc. or Dec.	P. c.
Bituminous:				
Barclay R. R. & Coal Penn. & Westmoreland.....	270,145	268,236	I. 1,909	0.7
Allegheny Region, Pa. R. R. & Westmoreland.....	158,362	168,955	D. 10,593	6.3
Penn. & Westmoreland.....	621,003	548,831	I. 72,172	13.2
West Penn. R. R.....	174,515	151,875	I. 22,640	14.9
Southwest Penn. R. R.....	33,601	21,265	I. 12,336	57.9
Pittsburgh Region, Pa. R. R.....	430,431	355,094	I. 75,337	21.2
Total bituminous.....	1,688,057	1,514,256	I. 173,801	11.5

	1879.	1878.	Inc. or Dec.	P. c.
Coke:				
Allegheny Region, Pa. R. R. & Westmoreland.....	41,354	.....	I. 41,354	.....
Penn. & Westmoreland.....	77,104	62,886	I. 14,218	22.7
West Penn. R. R.....	77,443	71,127	I. 6,316	8.9
Southwest Penn. R. R.....	780,875	640,308	I. 140,567	21.9
Pittsburgh Region, Pa. R. R.....	166,479	94,850	I. 71,629	74.4
Total coke.....	1,143,315	869,240	I. 274,075	31.5

The total shipments of anthracite for the ten

The coal tonnage of the Pennsylvania Railroad for the ten months ending Oct. 30, was as follows:

	1879.	1878.	Increase.	P. c.
Anthracite.....	802,584	605,073	197,511	32.6
Semi-bituminous..	1,324,928	1,320,871	4,057	0.3
Bituminous.....	1,448,553	1,380,569	68,984	4.9
Coke.....	1,161,757	873,872	287,885	32.9
Total.....	5,095,922	4,079,385	1,016,537	24.9

The distribution of Cumberland coal tonnage for the ten months was as follows:

	1879.	1878.	Inc. or Dec.	P. c.
By Balt. & Ohio R. R.	733,274	737,025	D. 3,751	0.5
" Ches. & Ohio Canal.	385,962	532,341	D. 146,379	27.5
" Bedford Div. P. R. R.	130,522	121,343	I. 9,179	7.6
Total.....	1,249,758	1,390,709	D. 140,951	10.1

Local consumption will account for the slight changes in the totals from those given above.

Actual tonnage of anthracite passing over the Pennsylvania & New York road for the eleven months of its fiscal year from Dec. 1 to Oct. 31 was: 1879, 796,140; 1878, 708,352; increase, 87,788 tons, or 12.4 per cent. The sources of supply this year were: From Pleasant Valley Branch, 29,892; State Line & Sullivan road, 44,375; Delaware, Lackawanna & Western, Bloomsburg Division, 249,404; Lehigh Valley road, 472,469; total, 796,140 tons.

The scarcity of coal in the Ohio River towns continues, and all available sources of supply are being worked to their utmost capacity. The railroad facilities for shipping coal are hardly equal to the strain, however, and should steady cold weather set in before a rise in the river comes, the coal roads of Ohio, Indiana and Kentucky will have heavy work before them all winter.

Petroleum Exports.

The exports, in gallons, for the ten months from Jan. 1 to Nov. 1 have been, for eight years:

Year.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.
1872.....	126,844,845	1870.....	210,509,094					
1873.....	205,794,577	1871.....	308,126,355					
1874.....	208,253,961	1872.....	285,000,420					
1875.....	209,956,870	1873.....	338,457,059					

This year the exports are 18 1/2 per cent. greater than last year and 10 per cent. greater than in 1877.

The percentage of the total exports shipped from each port has been for four years:

	1879.	1878.	1877.	1876.
New York.....	71.6	66.7	71.4	57.2
Philadelphia.....	20.2	20.2	12.9	26.2
Baltimore.....	6.1	11.8	12.3	15.5
Boston.....	1.7	1.0	1.2	1.1
Richmond.....	0.4	0.1	1.0	...
Portland.....	...	0.2	0.6	...
Norfolk.....	...	...	0.1	...
Total.....	100.0	100.0	100.0	100.0

New York's largest proportion has been this year. Baltimore seems to be losing its export business.

East-Bound Rates.

By the tariff of Nov. 10, the rates from Chicago are as follows, in cents per 100 lbs.:

	New York.	Albany and Schenectady.	To Buffalo, Pittsburgh and Detroit and Toledo.
First-class.....	12 1/2	11 1/2	65
Second-class.....	9 1/2	8 1/2	50
Third ".....	7 1/2	6 1/2	38
Fourth " and bxd. meats	45	35	25
Grain.....	30	25	20
Lumber.....	30 1/2	24 1/2	15
Bulk meats.....	50	45	27 1/2
Fresh beef, owner's risk.....	88	83	46
Dressed hogs.....	75	70	40
Cheese.....	40	...	...
Butter, eggs and wool.....	50	...	...

As usual, rates on all classes are 2 cents less to Philadelphia and 3 cents less to Baltimore than to New York. To Boston and New England points (Worcester, Springfield, Bridgeport, New Haven and Portland), the rates are 5 cents higher than New York rates except on the first and second classes, which are 10 cents higher.

The butter, cheese and eggs rates apply only to shipments to New York, Boston, Philadelphia and Baltimore.

Cotton.

Receipts and exports at the several sea ports for the two months of the crop year from Sept. 1 to Oct. 31 have been, in bales:

	Receipts.		Exports.	
	1879.	1878.	1879.	1878.
New Orleans.....	278,729	91,050	137,301	45,792
Mobile.....	92,720	37,534		6,680
Charleston.....	108,108	197,311	74,843	65,518
Savannah.....	247,414	282,526	78,384	88,449
Galveston.....	156,434	173,810	56,649	37,606
New York.....	19,410	18,301	137,504	86,327
Florida.....	3,404	0,204		
North Carolina.....	30,450	41,010	6,520	16,304
Norfolk.....	177,085	139,114	42,400	32,383
Other ports.....	30,263	15,477	57,060	36,386
Total.....	1,222,035	1,005,355	590,760	415,444

The percentage by each port is:

The percentage by each port is :				
	Receipts.		Exports.	
	1879.	1878.	1879.	1878.
New Orleans.....	22.8	9.1	23.1	11.0
Mobile.....	7.6	3.7	.....	1.6
Charleston.....	13.8	19.7	12.7	15.8
Savannah.....	20.2	28.1	13.3	21.3
Galveston.....	12.8	17.3	9.6	9.0
New York.....	1.6	1.8	23.3	20.8
Florida.....	0.3	0.0	.....	.....
North Carolina.....	3.2	4.1	1.1	3.9
Norfolk.....	14.5	13.8	7.2	7.8
Other ports.....	3.2	1.5	9.7	8.8

Last year the New Orleans business was nearly destroyed by the yellow fever in these months.

The Gulf ports altogether received 43.2 per cent., and exported 32.7 per cent. of the whole this year, against 30.1 and 21.6 last year.

The New York receipts (primary receipts: cotton received at one port and shipped thence to another, is credited only to the port where first received) are trifling, but its exports unusually large.

Lake Superior Iron Ore Shipments.

Shipments of iron ore from the Lake Superior region from the opening of navigation up to Oct. 29, were as follows, in tons:

	1879.	1878.	Inc. or Dec.	P. c.
From L'Anse.....	37,990	36,106	I. 1,884	5.2
" Marquette.....	484,250	438,180	D. 46,070	2.8
" Escanaba.....	639,894	412,177	I. 227,717	55.2
Total.....	1,162,140	946,467	I. 215,671	22.8

The great increase in shipments from Escanaba is probably due chiefly to the opening of the mines in the Menominee Range, and has, apparently, been made at the expense of the two Lake Superior ports.

Chicago & Southeastern Rates.

The following rates have been adopted on shipments from Chicago to points in Indiana and Ohio:

Chicago to	Crawfordsville.	Indianapolis.	New Albany.	Cincinnati.
First-class, per 100 lbs.	35 cts.	50 cts.	60 cts.	60 cts.
Second-class, per 100 lbs.	30 "	35 "	50 "	50 "
Third-class, per 100 lbs.	20 "	25 "	40 "	40 "
Fourth-class, per 100 lbs.	15 "	18 "	25 "	25 "
Fifth-class, per 100 lbs.	12 1/2 "	15 "	20 "	20 "
Grain.....	10 "	12 1/2 "	17 1/2 "	17 1/2 "
Flour, per barrel.....	30 "	35 "	40 "	40 "
Lumber, per 100 lbs.....	8 1/2 "	10 "	12 1/2 "	12 1/2 "
Class A, " " " " " "	25 "	30 "	35 "	35 "
Class B, " " " " " "	20 "	25 "	30 "	30 "
Class C, " " " " " "	15 "	20 "	25 "	25 "
Class D, " " " " " "	10 "	15 "	20 "	20 "
Class E, " " " " " "	5 "	10 "	15 "	15 "

The above rates took effect Nov. 3. Grain and flour rates are for car-load lots only; lumber rates for car-load lots, the car-load to be from 24,000 to 28,000 lbs. For Class D, 20,000 lbs. will be considered a car-load.

West-bound Rates.

Notice is given that rates on the special classes of freight made in September, will be advanced five cents per 100 lbs., from New York to Chicago, and in that proportion to other points, beginning Dec. 8. That is, salt, cement, old rails, steel rail ends, scrap steel, scrap iron, spiegel-eisen, pig-iron, and blooms, which were put into a separate class, Sept. 18, with the rate fixed at 25 cents per 100 lbs., from New York to Chicago, will be carried after Dec. 7, at 30 cents, and railroad iron, on which the rate was made 30 cents, Sept. 18, will be 35 cents Dec. 8. As was established last September, the rates to the western termini of the trunk lines, will not be less than 20 cents on rails, and 15 cents on the articles in the other class.

The traffic with above articles has greatly increased of late. Notice of the advance is given so long beforehand, because these freights are largely imported from Europe.

Provision Movement.

The result of the "summer packing season" for the eight months from March 1 to Nov. 1 are reported as follows by the Cincinnati Price Current (number of hogs packed):

	1879.	Per c.	1878.	Per c.
Cincinnati.....	170,000	4.6	154,517	4.6
Chicago.....	2,060,000	55.2	2,017,844	59.7
St. Louis.....	320,000	8.6	142,000	4.2
Indianapolis.....	232,000	6.2	312,224	9.3
Cleveland.....	312,000	8.3	229,385	6.8
Cedar Rapids.....	131,821	3.6	195,300	5.8
Kansas City.....	132,500	3.6	99,517	2.9
Other places.....	370,000	9.9	227,357	6.7
Totals.....	3,728,321	100.0	3,378,044	100.0

While Chicago is still incomparably ahead of any other place, it has not increased its summer packing nearly so much as several other places. There was a total increase of 350,277 hogs, but St. Louis gained 178,000, or 125 per cent., Cleveland 82,615, or 36 per cent., Kansas City 82,983, or 33 per cent., and the aggregate of the smaller packing towns 142,643, or 63 per cent., while there was a decrease of 50,224, or 26 per cent., at Indianapolis, and of 63,379, or 32 per cent., at Cedar Rapids.

The shipments of provisions from Chicago for the 12 months ending Nov. 1 (when the "winter packing season" begins) were:

	1879.	1878.	Increase.	P. c.
Pounds shipped.....	1,000,018,931	905,294,130	103,724,792	10.4

The shipments were equivalent to 45,792 full car-loads of 24,000 lbs.

THE SCRAP HEAP.

Long Trains.

We knew the long trains were coming. Here are some of them:

One of the longest trains ever seen on the Erie came into this station Sunday morning. It consisted of two locomotives, 115 cars and a caboose. The engines were Nos. 161, 590. The latter is the new mogul from the Susquehanna shops for the Western Division.

A train of 94 cars was sent to Burns Sunday for switch room.—Hornellsville (N. Y.) Times, Nov. 4.

A Singular Accident.

The LaFayette (Ind.) Courier tells this sad story: "Wash Carpenter of this city, at present an engineer on the Wabash road, met with a most horrible accident and one which will probably render him helpless for life, at Ft. Wayne lately. He was on his engine, about to pull out from the depot, when he detected something wrong with the air brake. The piston rod in the air chamber on the engine refused to work freely, and dismounting he unscrewed the brass cap at the end and poured in a quantity of oil, which, coming in contact with the hot metal, soon reached the boiling point. Still, however, the machine refused to work, and he bent down and looked into the aperture to see what was the matter. At this moment the piston became loosened and shooting forward, drove the mass of boiling, seething oil straight into the unfortunate man's face. The skin of his forehead peeled off instantly and dropped like a veil over his face. Several of his companions, who witnessed the accident, rushed to a boarding house near by, where medical aid was summoned. The eyeballs are out of their sockets, and it is doubtful if he will ever see again."

OLD AND NEW ROADS.

Atlantic & Gulf.—Mr. H. B. Plant, of Augusta, Ga., who bought this road at the recent foreclosure sale, is said to represent a combination now owning most of the consolidated mortgage bonds. No announcement has been made of the new owners' intentions as to the reorganization or future management of the road, further than the statement that no changes in the officers in charge are to be made at present.

Baltimore & Ohio.—The grain business at Baltimore has been so large this year that the facilities for handling it are not sufficient, and this company has begun to build a new elevator with a capacity of 2,500,000 bushels. It will stand near the other elevators, on the water front of the Locust Point yard. The foundations are now being put down, and the elevator is to be ready for use next spring.

The caving in of the Pinkerton tunnel on the Pittsburgh Division, caused by the burning out of the timbering, stopped through traffic for several days. The blockade was relieved by building a temporary track 1 1/2 miles long around the mountain, over which trains began to run Nov. 6. The temporary road is considerably longer than the line through the tunnel, but has no heavy grades, and traffic can be carried on as usual. The tunnel will be widened for double track, and will be reached with brick.

A dispatch from Baltimore, Nov. 12, says: "The regular monthly meeting of the directors of the Baltimore & Ohio

Railroad Company took place to-day. The annual report of the company was read and adopted, and will be presented to the stockholders on Monday next, at their annual meeting. Mr. Garrett announced that the grain blockade at Locust Point had been overcome. He stated that on Oct. 23, when the rules were adopted, through which it was expected the elevators would be relieved of the large accumulations of grain, the company had upon its tracks at Baltimore, and upon its lines east and west of the Ohio River, upward of 4,000 loaded cars, containing nearly 2,000,000 bushels, with more than 1,600,000 bushels of grain in the elevators at Locust Point. These cars have been relieved. In order to prevent the risk of continued blockade, the company issued orders on Oct. 23, declining to receive grain at all Western points, to go into the elevators at Locust Point, until their condition would assure the rapid handling and delivery of the grain on arrival at Baltimore. All the lines having, therefore, been relieved from accumulations, and there being no further risk of delays, on Nov. 9 orders were issued to renew shipments throughout the West, and it is expected, from the measures adopted, that no further embarrassments or delays will occur during the season. Mr. Garrett has been informed that a very large amount of shipping was on the way to Baltimore, and that it was expected tonnage would continue abundant during the remainder of the season, so that prompt and satisfactory markets and shipments might be expected for both wheat and corn."

Bellaire & St. Clairsville.—The Probate Court of Belmont County, O., has granted a petition for the appointment of a receiver for this road. The petitioner was the Riverside Iron Company, of Wheeling, W. Va., which furnished the rails for the road, taking part pay in bonds, and which now has a claim for some \$1,600 unpaid interest. The road is narrow-gauge, and is 6 1/2 miles long, from Quincy, O., to St. Clairsville.

Boston, Hoosac Tunnel & Western.—This road now has all the track laid on its road from Mechanicsville, N. Y., to the junction with the Troy & Greenfield at the Massachusetts state line, with the exception of about a mile at Hoosac Junction. The Troy & Boston crossings are all finished, and it is expected that the road will be all ballasted and ready for business early in December.

Boston, Winthrop & Pt. Shirley.—This narrow-gauge road, three miles long, for the year ending Sept. 30 last, earned \$5,146, or \$1,715 per mile. The expenses were \$6,025, leaving a deficit of \$879. The people along the line have subscribed some \$500 to induce the company to keep trains running through the winter. The company has \$18,000 bonded and \$3,505 floating debt.

Burlington & Missouri River in Nebraska.—On the extension of this company's Nebraska Railway, track is now laid to Aurora, Neb., 25 miles westward from the late terminus at York. This line is now 133 miles long, from Nebraska City to Aurora.

Canada Central.—A dispatch from London, Nov. 6, to the Toronto (Ont.) Globe says: "The prospectus of the Canada Central Railway has been issued, inviting subscriptions for 5 per cent. first mortgage bonds amounting to \$500,000. The price is placed at \$98 10s. per cent. The bonds are redeemable in 20 years, and the Canadian government guarantees the interest. The subscription list closes on Friday."

Carbondale & Shawneetown.—This road has been leased for 25 years to the St. Louis Coal & Coke Company, which has bought or leased several mines on or near the line, and has begun the building of a lot of coke ovens. The lessee also purposes extending the road some 10 miles eastward from its present terminus, to reach additional coal banks. It now extends from Carbondale, Ill., on the Illinois Central, east 18 miles to Marion.

Central Vermont.—The St. Albans (Vt.) Messenger says: "The great lawsuit between the Vermont & Canada Railroad Company and the Vermont Central Railroad Company, which has been upon the docket of the Franklin County Court of Chancery since 1855, and has more branches than even the immortal Jarndyce vs. Jarndyce, has again come before the Supreme Court for adjudication, this time in the form of a bill in chancery, the main object of which is to settle the priority of the liens upon the trust property, or, in short, to determine whether the accrued rent due the Vermont & Canada Railroad, amounting to about \$1,500,000, shall be first paid from the assets of the trust property, or the receivers' indebtedness, so called, consisting of floating debt amounting to about \$3,000,000; first equipment bonds, \$33,000 and interest; second equipment bonds, \$300,000 and interest; third equipment bonds, \$1,000,000 and interest; Stanstead, Shefford & Chambly bonds, \$444,000 and interest; Vermont & Canada guaranteed bonds, \$904,000 and interest; income and extension bonds, \$1,675,000 and interest—amounting in all to \$7,356,000 and interest."

"The orators in this bill are the Central Vermont Railroad Company, representing \$1,200,000 of the floating debt; C. H. Converse, of Boston, and James R. Langdon, of Montpelier, representing first equipment bonds and income and extension bonds; B. F. Cheney and James W. Emery, of Boston, representing Stanstead, Shefford & Chambly bonds; J. W. Emery, representing second equipment bonds; Ralph Day and Estes Howe, of Boston, Oscar J. Vail, of Montpelier, representing third equipment bonds; T. H. Perkins, of Boston, and James R. Langdon, of Montpelier, representing guaranteed bonds; T. H. Perkins and B. H. Deming, of Boston, and Lansing Millis, of Boston, representing income and extension bonds."

"The defendants set up in the bill are the Vermont & Canada Railroad Company, the Vermont Central Railroad Company, John Gregory Smith, Worthington C. Smith and Joseph Clark (now dead), trustees of the first mortgage bonds; Estes Howe, of Cambridge, Mass., and James H. Converse, of Boston; Francis A. Brooks and Otis Drury, of Boston, and E. D. Mandell, of New Bedford, Mass.; Judith W. Andrews, George Bemis, Seth Bemis, Peleg W. Chandler, and William Sohler, of Boston, holders of the first and second bonds."

Arguments in the case have been in progress for several days at Montpelier, Vt. The main point upon which, apparently, the present case turns, is whether the interest upon the so-called trust debt is to be considered a part of the necessary expenses of the trust, and to be deducted accordingly from the earnings before any net income can be considered as remaining, from which to pay the Vermont & Canada rental. The Central Vermont managers claim that the trust debt was created with the consent of the parties in interest, and that they cannot now object to the payment of interest upon it as a necessary part of the trust expenses. A large number of counsel are to be heard in the case, and the decision of the Court will probably not be rendered for some time.

Charlottesville & Rapidan.—The contract for building this road has been let to M. Parker, who will begin work at once. The road will be 26 miles long, from Gordonsville, Va., to Orange Court House, and it is intended to make a

new line for the Virginia Midland road, where it now uses the Chesapeake & Ohio tracks.

Chicago & Northwestern.—Track on the new Chicago & Dakota proprietary line is now laid to Volga, Dak., 36 miles beyond the late terminus at Late Benton, and 71 miles westward from the junction with the Winona & St. Peter at Tracy, Minn. Trains will soon run to the new terminus.

Chicago, Bellevue, Cascade & Western.—This road is now completed and opened for traffic to Zwingle, Ia., six miles westward from the late terminus at La Motte, and 18 miles from the junction with the Chicago, Clinton, Dubuque & Minnesota, at Bellevue.

Chicago, Rock Island & Pacific.—The tracks of the main line of this road and of the Keokuk & Des Moines Division run nearly parallel from Mitchellville, Ia., to Des Moines, some 16 miles. It is stated that the track of the Keokuk & Des Moines Division is to be changed, so as to make a junction with the main line at Mitchellville, and that six miles of track, from that place to Altoona, will be abandoned.

Cleveland, Tuscarawas Valley & Wheeling.—This company is laying new iron on its track on the north end of the road, where traffic is heaviest. The best of the old rails will be used on the extension from Uhrichsville to Bridgeport, where tracklaying is now in progress.

Flint & Pere Marquette.—Holders of consolidated bonds are notified that they must deposit their bonds with the Purchasing Committee by Dec. 1, if they desire to join in the reorganization.

Gulf, Colorado & Santa Fe.—Since the completion of the Brazos River bridge, the work on the extension from Richmond, Tex., to Brenham has been progressing fast. The track is reported down to a point 15 miles westward from Richmond and 79 miles from Galveston.

Illinois Central.—The Traffic Department reports the earnings for the month of October as follows:

	1879.	1878.	Increase.	P. c.
In Illinois.....	\$580,244	\$500,751	\$79,493	14.5
In Iowa (leased lines).....	170,632	148,089	22,543	15.4
Total.....	\$751,076	\$648,840	\$102,236	14.7

During October, 1879, the land sales were 3,160.50 acres for \$19,375.88, and the cash collected on land contracts was \$10,072.97.

Lake Erie & Western.—It is announced that this company and the LaFayette, Bloomington & Muncie are to be consolidated, the new company retaining the name of Lake Erie & Western. The consolidated company is to assume all the debts, issue its stock share for share for the present Lake Erie & Western stock, and issue four shares of its stock for each share of LaFayette, Bloomington & Muncie stock. The consolidated company will have then the following securities:

Stock (\$10,126 per mile).....	\$7,000,000
First-mortgage bonds, 6 per cent. (\$11,790 per mile).....	4,315,000
Income bonds (\$6,789 per mile).....	2,485,000
Total (\$37,705 per mile).....	\$13,800,000

The absolute interest charge, the interest on the income bonds being contingent only, will be \$258,900 yearly, or \$707 per mile of road. The consolidated company will own a main line from Fremont, O., to Bloomington, Ill., 356 miles, with a branch 10 miles long to Minster in Ohio, making 366 miles in all. Of the main line 40 miles, from Ft. Recovery, O., to Muncie, Ind., are still unfinished, though this section is all graded, with the track now being laid.

Lake Shore & Michigan Southern.—Railroad companies, like families, must "clean house" and get rid of the rubbish now and then, if they would keep things in proper order. The Cleveland (O.) Herald says:

"At the ticket office of the Lake Shore & Michigan Southern Railroad in the Union Depot the managers are taking stock of all of the tickets now in the possession of the company at Cleveland. This has not been done since 1868. The crates and boxes of tickets are piled around in dire confusion, while the clerks are busily engaged in checking and counting them. There are enough tickets there to take every man, woman, and child out of Cleveland and distribute them over the Union. A great many thousand of old unused tickets will be destroyed."

Louisville, New Albany & St. Louis.—The track on the extension of this company's road eastward toward New Albany is now laid to Francisco, Ind., 8½ miles from the old terminus at Princeton, and 37½ miles from the western terminus at Albion, Ill.

Macon & Brunswick.—Pursuant to notice, the lease of this road was offered at public competition at Macon, Ga., Nov. 6, by the Governor of Georgia. Five bidders appeared: Julius L. Brown, of Atlanta, representing several parties in that city, and it is said, the Nashville, Chattanooga & St. Louis Company; H. I. Kimball, of Atlanta, representing the parties who have just bought the Atlantic & Gulf road; Mr. Stanton, well known as the builder of the Alabama & Chattanooga, who represented Boston parties; Mr. Hazlehurst, representing several parties in Brunswick and New York, and Judge Gresham, representing a combination of stockholders in the Central Railroad, of Georgia. Before the bidding a protest was offered on the ground that the sale had not been advertised as long as required by the law authorizing the lease.

The Governor, however, decided to receive bids, though several of the parties withdrew, on the ground that they were not safe in bidding under the circumstances. The bidding, when it began, was active, and the offers ran up until Dr. Flewelling, for the Central Railroad party, offered \$176,000 a year, and Mr. Paine, who had been put up by some of the other parties, offered \$176,010. When this was reached, the time allowed for the sale had expired, and each of the bidders claimed that his offer should be accepted. The Governor finally refused to receive either, and, declaring the sale incomplete, adjourned it for 45 days.

Michigan Central.—This company has contracted with Mr. Thomas S. Hall to place his automatic electric signals on its road at Jackson station and through the Jackson yard. The block system will extend on the main line from Deyo's Crossing east of Jackson, to the Grand River Valley junction west of the station, and will cover all the crossings and dangerous points there.

Manhattan Elevated.—This company reports earnings and expenses as follows for October, the first month in which it has worked all the elevated roads in New York:

	Earnings.	Expenses.	Net.	Per cent.
Third Avenue Line.....	\$201,090	\$74,900	\$126,079	37.31
Sixth Avenue Line.....	148,038	61,814	86,224	41.77
Ninth Avenue Line.....	24,068	15,876	8,192	26.15
Total.....	\$373,175	\$152,680	\$220,495	40.93

The gross earnings show an increase of \$42,016 over those for September, of which \$16,333 came from the Third Avenue Line; \$23,220 from the Sixth Avenue, and \$2,463

from the Ninth Avenue Line. The high percentage of expenses on the Ninth Avenue is due to the reconstruction now in progress.

The number of passengers carried for the month was as follows:

	At 10 cts. fare.	At 5 cts. fare.	Total.	Average fare.
Third Avenue.....	1,268,887	1,481,948	2,750,835	7.306
Sixth Avenue.....	1,073,541	797,322	1,870,863	7.871
Ninth Avenue.....	130,374	197,824	327,198	7.061
All lines.....	2,481,802	2,477,094	4,958,896	7.502

The great excess of travel in the four hours daily in which 5 cents fare is charged is shown by the fact that very nearly one-half—49,957 per cent.—of the whole number of passengers were carried at the lower rate.

Mobile & Northwestern.—This company is at work on an extension of 12 miles from Jonestown, Miss., the present terminus, to Clarksdale. This will make the road 29 miles long from its terminus on the Mississippi opposite Helena.

Monson Branch.—It is proposed to build a short line from Dexter, Me., to the Monson slate quarries. It is thought that if the slate men will build the line, the Maine Central will lease it at a reasonable rent.

Nashville & Florence.—This company has already secured stock subscriptions to a considerable amount along the line, and is trying to secure more in Nashville. The proposed line is from Columbia, Tenn., on the Nashville & Decatur road, westward to Mt. Pleasant, and thence south by west to Florence, Ala., about 70 miles in all. The line is about 15 miles west of the Nashville & Decatur at Mt. Pleasant, and gradually diverges westward, to some 40 miles distant at Florence. It passes through a good country, well settled, and strikes some valuable iron-ore banks near Lawrenceburg.

Nashville & Tuscaloosa.—Track on this road is now laid to Graham, Tenn., 21 miles southward from the starting point at Dickson station, 40 miles west of Nashville on the St. Louis Division of the Nashville, Chattanooga & St. Louis road.

New Jersey Southern.—It is reported that this road, now controlled by the New Jersey Central, will build a branch line from some convenient point on the Southern Division—either Atsion or a point east of Vineland—to Cape May, with a view of securing some of the business there and of cultivating New York travel to that summer resort. From Atsion the distance is about 55 miles; from near Vineland, about 45, in either case over a country where a railroad can be cheaply built. Cape May was the terminus intended by the original projectors of the Southern road.

New York Elevated Railroads.—The New York Times of Nov. 7, says: "The statement that the West Side elevated road from the Battery to Harlem River is completed and will be open to the public in a few days, is pronounced by Vice-President Guilford to be premature. He says that he expects that portion of the line to be finished some time during the present month, but not before the 15th or 20th. The new stations will be at One-hundred and Forty-fifth street and at the terminus. Work is being pushed on the Ninth and Second avenue lines, and it is hoped to complete them both—the latter to Sixty-seventh street—by the 1st of January, when the Second avenue road and the branch to the City Hall will be simultaneously thrown open to travel. On the Ninth avenue line the old station at Liberty street has been abandoned and a new one is to be built at Cortlandt street. Just below this station a 'pocket' will be placed, where the trains will be made up. The building owned by the Loan & Improvement Company on Greenwich street, below Morris, is to be torn down, and the tracks of the Sixth avenue (formerly Metropolitan) line are to be continued down until they join the Greenwich street road. The trains on the Sixth avenue line will then be made up at the Battery, and passengers boarding them and desiring to go to any station on the Ninth avenue road will be transferred at Morris street. It has been determined to run the trains of the Ninth avenue (formerly New York), line through to Fifty-ninth street, and at that point a transfer station is to be built, where passengers desiring to go further north will be transferred to the cars of the Metropolitan line. The up and down trains on the New York line will run on the west side of Ninth avenue above Fifty-third street, and those of the Metropolitan road on the opposite side. The Second avenue structure is nearly complete as high as Sixty-fifth street, and the foundations for the pillars have been laid all the way to the Harlem River. The building at the junction of Catherine and Division streets and the Bowery has been torn down preparatory to carrying the structure over the sidewalk at that point. The foundations are finished, and the work of connecting the two east-side roads will soon be begun. The iron-work of the joint depot at the place of junction is nearly finished, and it will not take long to put it together."

"The Manhattan Company have, during the past week extended to all the roads under their control the system of selling ten-cent tickets in quantities to suit, which was formerly confined to the Metropolitan line. It is consequently no longer necessary for patrons of the New York lines to purchase tickets every time they wish to ride. The company has also adopted the plan of permitting school children to ride to and from their homes at all hours of the day for five cents fare. Any such child may obtain on application a card on one side of which the superintendent of his or her school is expected to certify to the fact of the applicant's scholarship, and is to write the latter's residence and the location of the school. This is to be returned to the company, who will indorse on its back an order to the station agents at the two terminal stations—nearest the school and the residence—an order to pass the bearer for five cents, and it will then be good so long as used for the purpose indicated."

"The West Side & Yonkers Railway Company, who were granted a charter by the first Board of Rapid Transit Commissioners, have made surveys and plans for about a mile of their road from the terminus of the Manhattan Railway Company at One Hundred and Fifty-fifth street to the depot of the New York & Northern road at High Bridge. These plans provide for a double-track road, one mile in length. The Harlem River is to be spanned by a draw-bridge, with a draw 300 feet in length, making it one of the longest double-track draws in the world. The Spuyten Duyvil Branch of the Hudson River road is to be crossed by a handsome iron bridge."

New York, Lake Erie & Western.—This company's August statement, coming by way of London, as usual, is as follows:

	1879.	1878.	Inc. or Dec.	P. c.
Gross earnings.....	\$1,450,222.78	\$1,445,929.08	\$4,293.70	0.3
Expenses.....	858,985.50	876,125.51	D. 17,140.01	2.0
Net earnings.....	\$591,237.28	\$569,803.57	\$21,433.71	3.8
Per cent. of exps.....	59.24	60.50	D. 1.25	2.2

The net earnings for the eleven months of the present fiscal year ending Aug. 31 show a total decrease of \$323,196.18, as compared with those of the same period in the preceding year.

An order lately issued requires all trains to come to a full stop before crossing a draw-bridge. The occasion of this order is the late draw-bridge accident on the New York & Greenwood Lake road; and it is the renewal of a regulation formerly in force on the road.

Work is now actively in progress on the new passenger station in Jersey City. The main building, which will contain the ticket office, waiting-rooms, etc., has the frame all up, and will be inclosed in another week. It is close to the ferry-house and cannot fail to be a great improvement on the rickety and dirty shed which has served for a depot for several years. The new station is of wood and is a temporary building only, not being expected to last more than two or three years, or until the company can build a suitable permanent structure.

Oakland & Cumberland Mountain.—This company has filed articles of incorporation in Tennessee. The office is at Oakdale Iron Works, in Roane County. John G. Scott, F. H. McClung, C. Powell, James Sevier and D. A. Carpenter are its incorporators.

Omaha & Northern Nebraska.—It is reported that an agreement has been concluded for the consolidation of this company with the St. Paul & Sioux City. This road was formerly the Omaha & Northwestern; it was sold under foreclosure last year and bought by the bondholders, who organized the present company. It is now completed from Omaha, Neb., northward to Tekamah, 47 miles, with an extension of 10 miles under construction. An additional 40 miles would complete the road to Sioux City and give the company a continuous line from St. Paul to Omaha, about 365 miles long. It is said that the consolidated company will be named the St. Paul, Sioux City & Omaha.

Pacific Railroads and the Government.—A dispatch from Washington, Nov. 12, says: "Vice President Huntington, of the Central Pacific Railroad Company, in paying \$220,000 to the government in accordance with the provisions of the Thurman act, entered a formal protest against the payment, and intimated that his company would make an effort to have the act repealed or modified, and in the mean time would present another case to the Supreme Court in the hope that the court would give the company some relief against what he styles 'The unjust and compulsory legislation of Congress.' The payment made to-day was on account of the company's indebtedness for the six months ending Dec. 31, 1878, and of the amount paid to-day, \$180,000 goes to the sinking fund established by the Thurman act. The Central Company still owes the government about \$600,000 on account of the half-year ending with December last."

Pennsylvania.—For some years past all express trains between New York and Philadelphia have been run to and from West Philadelphia, only local trains being run over the Amboy Division between Trenton and Camden. This fall, however, the company puts on two express trains daily running over the Amboy Division to Camden and reaching Philadelphia by the ferry to Market street. This is done to accommodate business men and others in the lower part of Philadelphia, to which the Market street ferry is very convenient.

The new cut through Bergen Hill near Jersey City is now nearly finished from the west end to the point where it crosses the old cut, near its centre, and considerable progress has been made on the work from the east end. It will have none of the sharp curves of the old cut, being a tangent from the long curve at Point of Rocks to the curve at Marion station, and, when completed, will allow a considerable increase in the speed of trains.

Philadelphia, Newtown & New York.—This road has been transferred to the Philadelphia & Reading Company, that company receiving a majority of the \$1,300,000 capital stock, and in return guaranteeing the interest on the \$700,000 first-mortgage 6 per cent. bonds which constitute the funded debt. The road now extends from Erie avenue, Philadelphia, to Newtown, 22 miles, and has been worked by the Pennsylvania under a temporary contract, its trains running to the West Philadelphia depot. Only ten days notice is required to terminate the contract; it has been given, and, as soon as the ten days expire, the Reading will take possession, and trains will run to the depot at Ninth and Green streets.

The road is said to be doing a paying local business. The object of the Reading in securing it, it is said, however, is not the business it now does, but the fact that by building a connecting line from Tabor station on the North Penn Division to Olney, about a mile, and extending the road from Newtown to Yardleyville, the line to New York can be shortened some three or four miles. To do this, however, would be a pretty expensive job, as some work would doubtless also be needed on the existing line, and it would make the costly line from Jenkintown to the Delaware comparatively useless. It may be that the control of the local traffic of a road, which must somewhat interfere with that of the North Penn Division, has been sufficient inducement for the lease, added to the possibility that the Pennsylvania might be able to use the road in a hostile way.

Pittsburgh & Western.—The Pittsburgh terminus of this road has heretofore been at Etna station, on the West Pennsylvania Division of the Pennsylvania road, five miles from Allegheny. Work has been in progress on the extension into Allegheny for some time, and last week the track was laid so that trains could run to the new station. This extension makes the road 35 miles long, from Allegheny to Zelenople. It was known until lately as the Pittsburgh, New Castle & Lake Erie road.

Quebec, Montreal, Ottawa & Occidental.—One of the chief measures proposed by the new ministry of the Province of Quebec, is the sale of this road to the Dominion of Canada. It is not certain, however, whether the Dominion is ready to take it.

Rhode Island & Massachusetts.—It is proposed to extend this road from Franklin, Mass., its present terminus north by west six miles to Metcalf station on the Milford Branch of the Boston & Albany. A preliminary survey shows an easy route.

St. Clairsville & Northern.—The preliminary survey of this road has been completed. It is to run from St. Clairsville, O., to a point on the line of the Cleveland, Tuscarawas Valley & Wheeling extension to Bridgeport, and will be about four miles long.

St. Louis, Kansas City & Northern.—On the night of Nov. 9, the west span of the St. Charles bridge over the Missouri on this road, gave way as a freight train was crossing it, and 17 loaded stock cars with the caboose fell 80 feet into the river. The bridge did not break, apparently, for the whole span went down with the cars upon it, and laid horizontally just adjoining the piers. The trusses were, of course, pretty well broken up by the fall and the cars wrecked. Two brakemen and two drivers who were in the caboose, were killed; two other drivers were hurt.

St. Paul, Minneapolis & Manitoba.—A second mortgage on all this company's property, made to John S. Ken-

nedy and Samuel Thorne, trustees, for \$8,000,000, has been placed on record in Minnesota. A first mortgage for the same amount had previously been recorded.

Saginaw & Mt. Pleasant.—The tracklaying on this road is completed, and it was to be opened for traffic Nov. 15. It is a narrow-gauge road, extending from Coleman, Mich., on the Flint & Pere Marquette road, southwest to Mt. Pleasant, a distance of 14½ miles. It is nearly level, and has but few curves, and has not been an expensive road to build, the estimated cost, laid with 35-lb. steel rails, being about \$7,000 per mile. A large part of the line is through a dense forest of hard wood.

Securities on the New York Stock Exchange.—The following securities have been placed on the lists at the New York Stock Exchange:

Baltimore & Ohio.—First mortgage 6 per cent. bonds, Parkersburg Branch, \$3,000,000.

Chicago, Milwaukee & St. Paul.—First mortgage Davenport & Northwestern Division bonds, \$3,000,000.

Chicago & Northwestern.—Sinking fund 6 per cent. bonds of 1879, \$3,400,000.

Indiana, Bloomington & Western.—Stock, \$2,500,000; preferred first mortgage bonds, \$1,000,000; first mortgage bonds, \$3,500,000; second mortgage bonds, \$1,500,000.

Louisville, New Albany & Chicago.—Stock, \$3,000,000.

Michigan Central.—New 6 per cent. bonds of 1909, \$1,000,000.

Oregon Railway & Navigation.—Stock, \$6,000,000; bonds, \$6,000,000.

Philadelphia & Reading.—Common stock, \$32,726,375; preferred stock, \$1,551,800; bonds, \$72,501,027. Farmer's Loan & Trust Co., reg. in New York.

St. Paul, Minneapolis & Manitoba.—Stock, \$15,000,000; first mortgage, 6 per cent. bonds, \$8,000,000; second mortgage bonds, \$8,000,000.

Wabash, St. Louis & Pacific.—Common stock, \$20,000,000; and preferred stock, \$20,000,000.

Selma & Gulf.—Notice is given by John W. Lapsley, Trustee, to the holders and owners of what are termed the "first mortgage state-insured bonds of the Selma & Gulf Railroad Company," that the railroad and other property of said company was sold for \$120,000, and that, after paying all preferred claims, there will remain in the hands of the Court about \$50,000 to be distributed *pro rata* among the holders of said bonds who shall present and prove their bonds before March 1, 1880.

Shenandoah Valley.—The extension of this road from Shepherdstown, W. Va., northward to Hagerstown, Md., has been finally located and contracts will be let as soon as the right of way can be secured. The distance is about 18 miles, and the extension will give the road a connection with the Cumberland Valley and the Western Maryland roads at Hagerstown.

Southern Pacific.—Work on the grading and track-laying eastward from the summer terminus at Casa Grande, Arizona, has been resumed. The company has been for some time sending material forward, and the working force is ready.

Springfield, Jackson & Pomeroy.—The purchasers of this road at the recent foreclosure sale have organized the Springfield Southern Railroad Company. The articles of incorporation of the new company provide for its extension from the present terminus at Jackson, O., south by east to a point on the Ohio River opposite Huntington, W. Va., the terminus of the Chesapeake & Ohio road. The new company will also change the road from 3 ft. to standard gauge. This change will be made as soon as the necessary preparations can be completed, and work on the extension will also be begun soon.

Stellaville Branch.—It is proposed to build a railroad from Stellaville, in Jefferson County, Ga., to Harlem or Dearing on the Georgia road. The distance is about 20 miles, and no heavy grading would be needed.

Texas & St. Louis.—The track on this road is now laid to Sulphur Fork, Tex., 30 miles southwest from Texarkana. The tracklayers were, at last accounts, waiting the completion of a bridge there to resume work toward Mt. Pleasant, to which point nearly all the grading is done. No regular trains are run as yet, but freight trains are sent out as required, and the road is now bringing cotton to Texarkana from several points on the line.

Tioga & Williamsport.—It is proposed to connect the coal region of Tioga County, Pa., with the Pennsylvania and the Reading systems by building a railroad from Antrim, the terminus of the Corning, Cowanesque & Antrim road, into the Pine Creek Valley and down that stream to the West Branch of the Susquehanna at Jersey Shore, thence down the West Branch to Williamsport. The distance is about 40 miles through a rough and difficult country, but the Pine Creek route is said to be entirely practicable. Part of it was surveyed several years ago by the Jersey Shore, Pine Creek & Buffalo Company.

Union Pacific.—This company is now building several branch lines in Nebraska, intended as feeders and to open up lands for settlement. The Omaha & Republican Valley road is being extended westward some 10 miles, and grading is in progress on a branch 58 miles long, from Valparaiso to Beatrice, on which also tracklaying has been begun. The Omaha, Niobrara & Black Hills road is now nearly all graded from Jackson, on the Union Pacific main line, north 48 miles to Norfolk, and track is to be laid this year. This line is also to have a branch 33 miles long, to Albion. Another branch is also being graded from Grand Island, on the main line, northward to St. Paul, 22 miles.

Vernon, Greensburg & Rushville.—This company has closed a contract with Col. Horace Scott, of Louisville, Ky., to build the road from North Vernon, Ind., north by east through Greensburg to the north line of Decatur County. The distance is 31 miles, and the work is to be done by Nov. 1, 1880. Col. Scott will begin work as soon as the road can be located.

Wabash.—On the night of Nov. 11, three spans of the bridge over the Illinois River at Meredosia, Ill., were blown down by a tornado. The road is temporarily blocked, but trains are run over the Hannibal & Naples Branch and by the Chicago Burlington & Quincy tracks to Quincy.

Wabash, St. Louis & Pacific.—This consolidated company has been fully organized and permanent officers chosen. The directors and officers are the same as were indicated beforehand by general report.

Notice is given that the stock of the consolidated company will be ready for issue at the office in New York, Nov. 14. Holders of St. Louis, Kansas City & Northern stock will receive preferred and common stock of the new company, share for share, in exchange for their present securities. Holders of Wabash stock will receive one share of preferred and one of common stock for each two shares of their present holdings.

Western & Atlantic.—The change of control of this road noted last week was made by the purchase of the shares

in the lease held by Simon Cameron and some other Northern stockholders by Col. E. W. Cole, President of the Nashville, Chattanooga & St. Louis Company. Mr. W. T. Walters, of Chattanooga, retains his interest. Col. Cole, it is stated, now holds the controlling interest in the lease, but it is also stated that no change in the management is intended, nor will any attempt be made at discrimination against any connecting lines. The lease of the road from the state of Georgia, indeed, requires that the lessee company shall treat all connecting lines impartially and exchange business on equitable terms.

The transfer of the controlling interest caused some excitement at Cincinnati, where it was considered as an attempt to control the road in the Nashville, Chattanooga & St. Louis interest, as opposed to the Cincinnati Southern. In answer to a dispatch from the Southern trustees, Ex-Gov. Brown, President of the Western & Atlantic Company, assures them that no hostile action is intended, and that no change in the policy of the company is expected.

Wheeling & Parkersburg.—A preliminary organization has been made at Wheeling, W. Va., of a company to build a narrow-gauge road from that city, south by west, down the east bank of the Ohio River to Parkersburg, a distance of 74 miles. The project has been under discussion for some time, the moving cause being the long-continued low water in the Ohio, and the increasing uncertainty of that river as a channel of transportation.

Wisconsin Valley.—This company offers to its stockholders \$175,000 new 7 per cent. bonds to be used in extending the road from Wausau, Wis., northward to Jenny, 17½ miles. They are offered at 90, and the proceeds, with some county bonds voted in aid of the road, will be sufficient to build it. The bonds are secured by a first mortgage on the extension.

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Chicago & Eastern Illinois.

This company owns a main line from Dolton, Ill., to Danville, 107.5 miles, and the Indiana Division, from Bismarck to Coal Creek, Ind., 24 miles. It leases the use of the Pittsburgh, Cincinnati & St. Louis track from Dolton to Chicago, 20.5 miles, making 152 miles worked. There are 21 miles of sidings.

The company is successor through foreclosure to the Chicago, Danville & Vincennes. Its second annual report covers the year ending Aug. 31, 1879.

The general account is as follows:

Stock (\$2.533 per mile).....	\$333,054
First mortgage bonds (\$22.814 per mile).....	3,000,000
Income bonds (\$5.432 per mile).....	714,329
Bills and accounts payable.....	288,002
Income account, balance.....	98,660

Total.....	\$4,434,045
Road and equipment (\$30.633 per mile).....	\$4,030,854
First mortgage bonds held by company.....	310,000
Cash, materials and receivables.....	83,191
Total.....	4,434,045

The company holds \$10,000 less first mortgage bonds than

it did a year ago; otherwise there is no change but the issue of a small amount of income bonds.

The traffic for the year was as follows:

	1878-79.	1877-78.	Inc. or Dec.	P. c.
Passengers carried.....	93,908	111,058	D.	17,090 15.4
Passenger mileage.....	3,612,690	4,029,197	D.	416,507 10.3
Tons freight carried.....	567,222	468,127	I.	99,095 19.9
Tonnage mileage.....	60,320,702	50,868,633	I.	12,452,120 21.9

Average rate:

Per passenger per mile.....	3.00 cts.	2.75 cts.	I.	0.25 ct. 9.1
Per ton per mile.....	0.96 "	1.10 "	D.	0.14 " 12.7

Passenger traffic fell off, while freight increased. A large part of the freight traffic is in coal, which must be carried at very low rates. The through traffic in other articles is also for the most part carried at low rates, owing to the number of points at which the road meets with competition. Through business furnished last year 10,418 passengers and 303,136 tons of freight; local, 63,550 passengers and 288,086 tons of freight.

The earnings for the year were as follows:

	1878-79.	1877-78.	Inc. or Dec.	P. c.
Passengers.....	\$108,019	\$110,843	D.	\$2,824 2.5
Freight.....	668,381	677,961	I.	40,420 6.4
Mail, express, etc.....	51,490	45,732	I.	5,758 12.3

Total.....	\$831,890	\$734,536	I.	\$97,354 6.0
Expenses.....	529,503	555,040	D.	25,537 4.6

Net earnings.....	\$302,386	\$229,516	I.	\$72,880 31.8
Gross earn. per mile.....	5,473	5,162	I.	311 6.0
Per cent. of expenses.....	1,990	1,510	I.	480 31.8
Per cent. of expenses.....	63.90	70.75	D.	7.15 10.1

Had the rates of the preceding year been obtained, the gross revenue of the road would have been \$928,956. Already the revival of business has enabled rates to be advanced, and it is anticipated that the revenue derived from general freight will be considerably increased during the coming year. The rates for the transportation of coal will remain low, however, during this winter, an account of the competition with anthracite coal.

The operating expenses, with the exception of maintenance of cars, have been as low as could be expected, considering the largely increased tonnage handled.

The following amounts have been expended on account of betterments, being amounts in excess of an average renewal account: Ballast, \$19,638; bridges, \$12,793; cross-ties, \$10,412; ditching, \$1,908; steel rails, \$20,482; total, \$65,232.

A lease has been made with the Chicago & Western Indiana Railroad Company by which this road obtains, in perpetuity, an entrance from Dolton, the present northern terminus of the road, into the city of Chicago, with ample yards, round house, freight depot, river docks, passenger station, etc. This will give a local and suburban business for a distance of 17 miles from Chicago which the terms of the lease with the Pittsburgh, Cincinnati & St. Louis road have not permitted this road to enjoy.

Cincinnati, Sandusky & Cleveland.

This company owns a line from Sandusky, O., to Dayton, 154½ miles, with a branch from Carey, O., to Findley, 15½ miles, and it leases the Columbus, Springfield & Cincinnati road from Springfield to Columbus, 44½ miles. It leases 24 miles of the road owned from Springfield to Dayton, to the Cleveland, Columbus, Cincinnati & Indianapolis Company, leaving 190 miles worked, and 169½ owned. The road is now in the hands of Mr. J. S. Farlow, Receiver, in a foreclosure suit; efforts to adjust the suit are being made. The report is for the year ending June 30, 1879.

The equipment consists of 30 engines; 2 parlor cars, 2 sleeping cars, 23 passenger, and 11 baggage and mail cars; 234 box, 64 stock 95 flat, 311 coal, and 11 caboose cars.

The general account is as follows:

Stock (\$23.563 per mile).....	\$4,005,750.00
Preferred stock and scrip (\$2.224 per mile).....	429,037.45
Bonds and overdue coupons (\$14.689 per mile).....	2,497,194.60
Accounts and balances payable.....	182,086.03
Col. Spring. & Cin. rent account.....	44,573.92
Profit and loss.....	35,582.18

Total.....	\$7,195,826.18
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Road and equipment (\$30.594 per mile) \$6,221,026.13

Stocks owned..... 429,037.45

Estimated value of property recovered from R. R. Sloane..... 100,000.00

Cash, materials and receivables..... 110,900.05

Total..... 7,195,826.18

The bonded debt consists of \$1,086,000 first mortgage bonds; \$1,072,725.60 second mortgage bonds and scrip; \$187,618.50 coupon scrip certificates, and \$170,852.50 overdue coupons. The yearly interest charge, including sinking fund payment of \$10,000 and preferred stock dividends is \$225,479. The nominal floating debt is \$399,112.45, but of this \$251,728.50 consists of coupons on sinking fund bonds, coupons to be funded and similar items, and \$62,337.32 is the monthly pay-rolls and vouchers, leaving the actual floating debt only \$85,046.63.

The traffic for the year was as follows:

Train mileage, passenger.....	426,370
" " freight.....	232,189
" " service and switching.....	148,058

Total.....	826,617
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Freight-car mileage, company's cars..... 2,507,256

foreign cars..... 2,060,658

Total..... 4,567,914

Tons freight carried (local 248,510, through 158,148)..... 406,654

The cost of locomotive service was 15.36 cents per mile.

Freight tonnage showed an increase of 41,688 tons, or 10.2 per cent. There was an increase of 329,922 car miles of company's cars and a decrease of 92,267 of foreign cars.

The earnings for the year were as follows:

	1878-79.	1877-78.	Inc. or Dec.	P. c.
Passengers.....	\$205,218.79	\$206,787.67	D.	\$1,568.88 0.8
Freight.....	409,485.82	398,579.49	I.	10,916.33 2.7
Express, mail, etc.....	40,585.14	41,834.49	D.	1,229.35 3.0
Rents.....	69,868.85	67,621.57	I.	2,247.28 3.3

Total.....	\$725,168.60	\$714,823.22	I.	\$10,345.38 1.4
Expenses.....	505,003.25	534,917.19	D.	29,853.94 5.6

rails, 12.24 miles of repaired rails, and 72,690 ties. A new Howe truss bridge was built and others repaired.

The Receiver believes that the arrangements for adjusting the company's debt will soon be concluded, and that the